2001
R-2508 COMPLEX
USER'S HANDBOOK

7 JUNE 2001

R-2508 JOINT POLICY AND PLANNING BOARD

EDWARDS AIR FORCE BASE, CALIFORNIA

7 June 2001

MEMORANDUM FOR ALL R-2508 USERS

FROM: R-2508 Joint Policy & Planning Board (JPPB)

SUBJECT: R-2508 User's Handbook

1. The R-2508 User's Handbook contains all required information needed by your organization to properly schedule and operate in the R-2508 Complex. The handbook is published under the authority of the R-2508 Joint Policy and Planning Board (JPPB) and developed by the R-2508 Complex Control Board (CCB). This handbook is in addition to mandatory annual R-2508 Complex Procedures briefing administered by the R-2508 Central Coordinating Facility (CCF).

2. The Handbook contains procedures for safely and effectively accomplishing your missions while at the same time providing aircrews an awareness of the sensitivities and issues affecting the Complex today. Continued preservation of the airspace requires positive public relations with the civilian communities and the other agencies sharing the land and airspace with the military mission. Complex management has maintained a proactive relationship with the public and public land management agencies. With the increased emphasis in recent years at the national level on the impact of over-flights to national parks and other publicly managed lands, public support of the DOD mission in R-2508 has begun to seriously erode. We must maintain a trusting relationship with the agencies and communities beneath the Complex or be forced to live with mission impacting restrictions later.

3. Unit Commanders and authorized civilian activities using the R-2508 Complex are responsible for ensuring compliance with the provisions of this handbook. As an aircrew member, either military or civilian, it is incumbent upon you to know the operating procedures and fly responsibly so as to be safe while simultaneously supporting DOD's efforts in being a good neighbor to the public and the other agencies, which coexist under irreplaceable airspace.

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Chapter

1

1.0 Introduction

This handbook prescribes policy and standard operating procedures for all aircrews operating in the R-2508 Complex.

This handbook dated: 7 June 2001 is the current handbook.

Recommended changes should be forwarded to:

R-2508 Central Coordinating Facility
412 OSS/OSAC
100 E. Sparks Dr.
Edwards AFB, CA 93524-8090

Message: 2508CCF EDWARDS AFB CA//
Telephone: DSN 527-2508; (661) 277-2508
Fax: DSN 527-4798; (661) 277-4798
E-mail: 2508CCF@edwards.af.mil

Changes and/or revisions to this handbook are available on line at
http://r2508.edwards.af.mil/

Chapter

2

2.0 General Operating Procedures for R-2508 Complex

This chapter discusses general operating procedures relating to all work areas, including:

2.1 General Complex Information

2.2 The Scheduling Process

2.3 Complex Scheduling Agencies

2.4 Special Activities

2.5 Scheduling Special Operations

2.6 Scheduling Large-Scale Exercises

2.7 Operating Remotely Operated Aircraft (ROA)

2.8 Flight Planning Requirements

2.1 General Complex Information

The R-2508 Complex is comprised of Military Operations Areas (**MOA**s) and Air Traffic Control Assigned Airspace (**ATCAA**s).

MOAs: The four main MOA work areas—Isabella, Owens, Saline, and Panamint—have a minimum altitude boundary of 200 feet AGL (see Figure 2-1).

- MOAs **DO NOT** include airspace below 1,500 feet AGL within 3 miles of any charted airport, except for Mojave Airport's Class D airspace (4,800 feet MSL within a 5 NM radius, excluding the airspace east and parallel to a line ½ mile west of R-2515).
- **Portions of these major work areas are located over Sequoia/Kings Canyon National Parks, John Muir and Domeland Wilderness Areas, and Death Valley National Park, (see Figures 7-4 & 7-5) where the lower limit of the MOA is 3,000 feet AGL.**

NOTE: Exclusion of MOA airspace about the Death Valley National Park and Domeland Wilderness Area applies to the 1977 contours of the former National Monument and Wilderness Area. This difference in affected airspace may not be accurately reflected in Sectional Charts. Refer to Figures 7-4 & 7-5 in Section 7.0 and contact CCF for more information.

CAUTION! ***The Owens MOA does not include the airspace that is designated as Bishop MOA (Figures 2-1 and 2-2). Aircrews must be aware of this boundary difference to prevent spillouts into Oakland Air Route Traffic Control Center (ARTCC) airspace.***

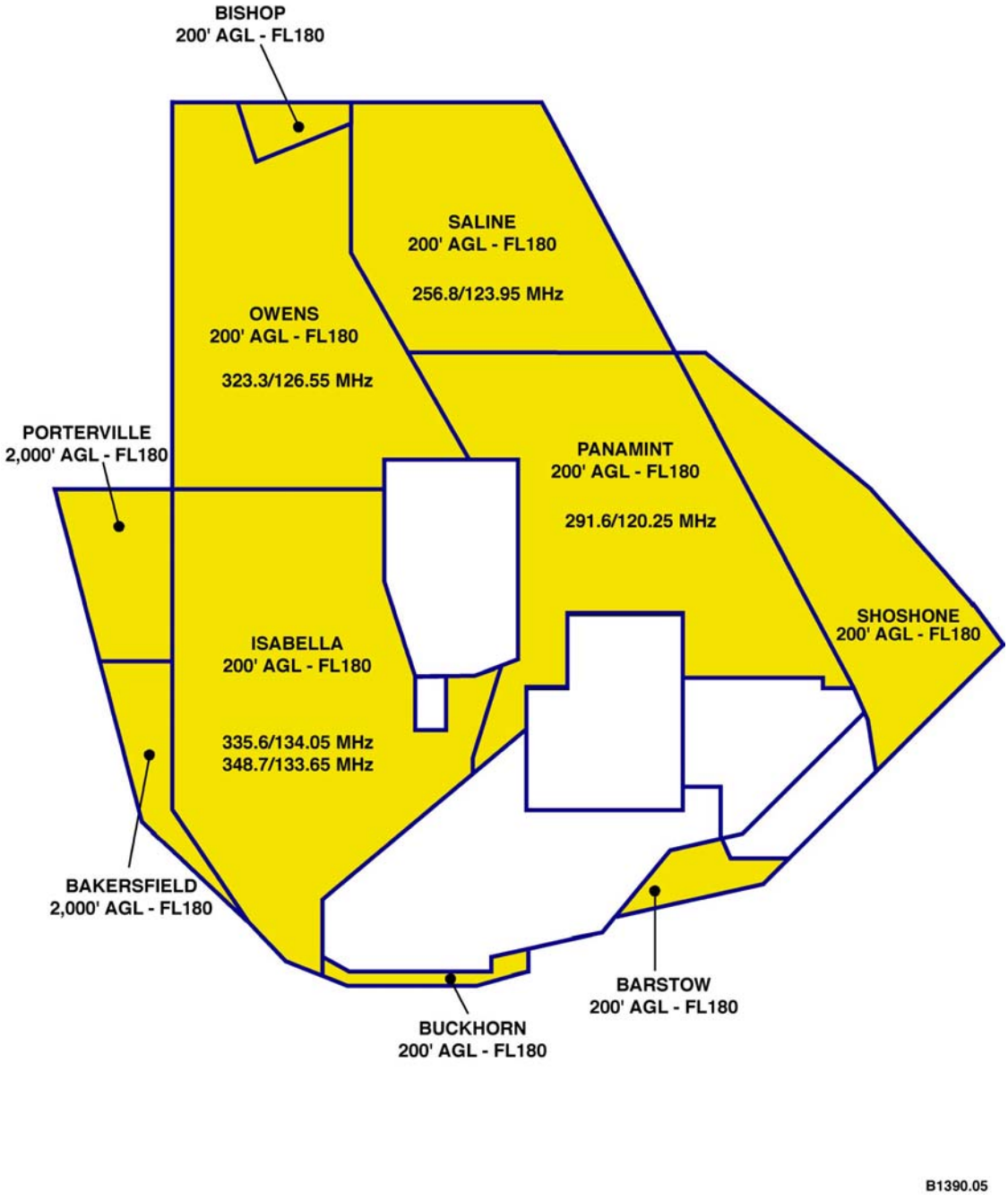

Figure 2-1. *Military Operations Areas (**MOAs**).*

ATCAAs: The ATCAAs (Figure 2-2) are used to fill the airspace gap between the top of the MOAs (FL180) and the base of R-2508 (FL200). When R-2508 is not activated, the ATCAAs may extend upward to FL600. ATCAAs are also located above the peripheral MOAs, outside the lateral boundaries of R-2508, to provide additional work areas up to FL600 for segregation of military operations from IFR traffic.

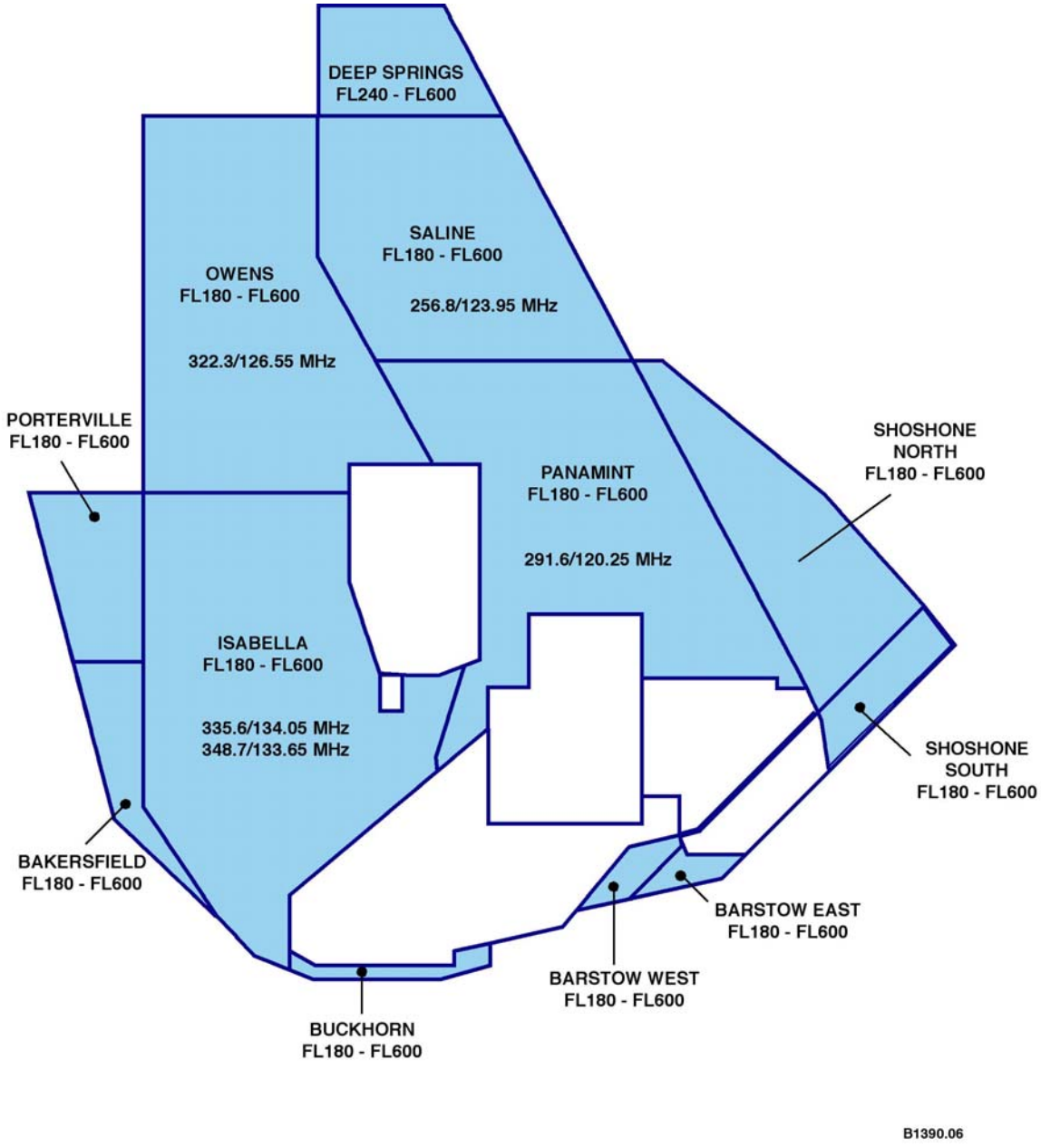

Figure 2-2. *Air Traffic Control Assigned Airspace (**ATCAAs**).*

2.2 The Scheduling Process

R-2508 Complex scheduling requirements apply to all Complex flight activities, including special operations and large-scale exercises.

CCF is the designated airspace management and scheduling authority for the R-2508 Restricted Area, Military Operations Areas (MOAs), and Air Traffic Control Assigned Airspace (ATCAAs). CCF coordinates mission requirements of all R-2508 Complex users to ensure optimum airspace utilization and safety.

NOTE*: Military units requiring use of R-2508 Complex airspace must comply with scheduling requirements established in OPNAVINST 3710.7, AFI 13-201, U.S. Army AR 95-50, FLIP, and this Handbook.*

2.2.1 Airspace Scheduling

Airspace is either activated for military use or released for joint use.

When R-2508 Complex airspace is activated for military use, it is reserved as **scheduled**. When Complex airspace is not scheduled, it is released to the Federal Aviation Administration (FAA) for **Joint-Use**.

When scheduling airspace:

- **Request only those areas and altitudes necessary for mission completion.** Additional areas and altitudes may be requested in flight, if required, contingent upon the status of the airspace (activated for military use or released for joint use).
- **CCF must have 2 hours notice to reactivate MOA/ATCAA airspace.** JOSHUA (FAA) will NOT issue a work area clearance when airspace is released for joint use.
- **Schedule any weekend and holiday operations through CCF during normal CCF operating hours,** M-F 0600-1800 Local (excluding Federal holidays)**.**
- **Changes to *previously scheduled* events shall be coordinated with the CCF duty airspace manager at: 1-866-805-2851.**
- **Changes in Area that require activation of additional airspace must be made at least 2 hours in advance to activate the airspace.**
- **Forward cancellations directly to TRACON at (661) 277-3843 or DSN 527-3843.**

NOTE: TRACON is NOT authorized to schedule or activate any unscheduled R-2508 Complex airspace.

Figure 2-3*. Overview of R-2508 Complex Airspace.*

2.2.2 Aircraft Scheduling

To schedule aircraft in the R-2508 Complex:

1. **Submit the R-2508 Complex Flight Schedule to CCF by 1700(local) one working day prior to the date of intended use.**
2. **Submit R-2508 Complex Flight Schedules for weekend or holiday period events to CCF, prior to 1700(local), the Friday before.**
   - **If the flight schedule is late, airspace/work areas may not be available due to the release of Complex airspace for joint use.**

Information shall include:

- Aircraft Call Sign
- Number and Type aircraft
- Estimated time of entry (in ZULU) into Complex airspace
- Estimated delay within Complex airspace (1+00, 1+30 etc.)
- Altitudes (highest altitude required for mission)
- Departure/Arrival airport
- Requested and/or approved airspace. Indicate work areas (MOAs/ATCAAs) **and** any internal restricted areas.
  - *Aircrews are responsible for scheduling any Internal Restricted areas with the appropriate agency.*
- Remarks
  - Type mission/activity to be conducted
  - Mission frequency, if required
  - Any MTRs, low-level or navigation routes that affect R-2508 Complex airspace. (Aircrews are responsible to schedule any route of intended use with the appropriate route scheduling agency)
  - ANY special activities (e.g., NVG/NVD, ECM, Tanking, "Lights out," etc.)

Call Signs

Call signs provided to CCF for activities in the R-2508 Complex shall not exceed 7 characters/numbers and shall be the same as filed on a DD-175. Two-letter abbreviated call signs, such as BH-1 for "Bloodhound 01," will be interpreted and broadcast as "BRAVO HOTEL 01" by Air Traffic Control (ATC). Tactical call signs shall not exceed 7 characters/numbers and shall be a pronounceable word, in accordance with *DoD FLIP, General Planning (GP), Flight Plans*.

Additions, Changes, and Cancellations

Any add-ons, call sign changes, or time slips of more than 1/2 hour before or 1 hour after the proposed time of Complex entry, NOT coordinated with CCF, are considered unscheduled events.

- If changing ***previously scheduled*** events after CCF's normal working hours (0600-1800 M-F) contact CCF duty airspace manager at: 1-866-805-2851.
- Changes in area that requires activation of additional airspace must be made at least 2 hours prior to activate the airspace.
  - **Notification of cancellations is required to ensure proper management and release of Complex airspace for joint use.**

2.2.3 Policy for Unscheduled Aircraft

For unscheduled aircraft, the following procedures are enforced:

1. **Fixed-wing units failing to comply with scheduling policies shall be restricted to FL180 and above within the R-2508 Complex.**
2. Commanders of participating units operating in the R-2508 Complex will be notified of unscheduled aircraft from their unit that arrive in R-2508 Complex Airspace.
3. IFR aircraft may encounter extensive delays or may be denied access when requesting to transit the R-2508 Complex if they are not participating aircraft.

2.2.4 Transitioning Participating Aircraft

Participating aircraft that have filed a flight plan to land at Naval Air Weapons Station (NAWS) China Lake or Edwards Air Force Base **must schedule with CCF**.

- **Failure to do so may cause the aircraft to be considered as unscheduled.**

2.3 Complex Scheduling Agencies

Units planning operations in R-2508 Complex airspace should be prepared to coordinate and schedule through one or more of the following agencies that have scheduling and operational control.

Area	Agency	Hours of Operation	Function	Contact Numbers
R-2508, MOAs & ATCAAs	R-2508 Central Coordinating Facility (CCF)	0600–1800 M-F	Complex Management, User / Pilot Briefings, Airspace Scheduling	DSN 527-2508 (661) 277-2508 Fax: DSN 527-4798 (661) 277-4798 Mobile: 1-866-805-2851 E-mail: **2508CCF@edwards.af.mil**
R-2502N / R-2502E	NTC Fort Irwin	24 hours a day	Scheduling	DSN 470-4320 / 6816 (760) 380-4320 / 6816 Fax: DSN 470-6368 (760) 380-6368
		0800–1600 M-F	Installation Aviation Officer	DSN 470-4072 / 4167 (760) 380-4072 / 4167 Fax: DSN 470-6368 (760) 380-6368
R-2505 / R-2506	NAWCWD China Lake	0700–1700 M-Th 0700–1600 Non-civilian payday Fridays	COSO Range Scheduling	DSN 437-6800 (760) 939-6800 Fax: DSN 437-6950 (760) 939-6950
			Test Management Office	DSN 437-6807 (760) 939-6807 Fax: DSN 437-6950 (760) 939-6950
			Airspace Surveillance Center (ASC) "China Control"	DSN 437-6908 / 6909 (760) 939-6908 / 6909 Fax: DSN 437-6855 (760) 939-6855
R-2515	Edwards AFB	0600–1700 M-F	Resource Operations Center	DSN 527-3940 / 4110 (661) 277-3940 / 4110 Fax: DSN 527-9685 (661) 277-9685

Area	Agency	Hours of Operation	Function	Contact Numbers
R-2515	Edwards AFB	0600–1530 M-F	Airspace Management Office	DSN 527-2446/ 4453 (661) 277-2446 / 4453 Fax: DSN 527-4462/5544 (661) 277-4462/5544
R-2524*	NAWCWD China Lake	0630–1630 M-Th	Echo Range (ECR) Scheduling	DSN 437-9128 / 9131 (760) 939-9128 / 9131 Fax: DSN 437-9152 (760) 939-9152
			Test Management Office	DSN 437-9149 (760) 939-9149
Superior Valley	NAWCWD China Lake	0630–1630 M-Th	Range Manager	DSN 437-9135 (760) 939-9135 Fax: DSN 437-9152 (760) 939-9152

R-2524 does not schedule Superior Valley Tactical Training Range.

2.4 Special Activities

Special activities are defined as operations involving one or more of the following:

- Aerial refueling
- Anchoring/Holding pattern requirements
- Air intercept/Air Combat Maneuvering (ACM) activities (5 to 10 aircraft)
- Escorted Remotely Operated Aircraft (ROA) or missile flights
- Ground control intercept (GCI) activities
- A concentration or continuous flow of aircraft
- Electronic Counter Measures (ECM) (jamming/chaff corridors; not self-protection)
- Airborne Radar Unit (ARU)/Communications link
- Tow Operations

Requests for special activities must be submitted with at least 7 working days' lead time to allow all necessary coordination/changes to be approved by at least 48 hours prior to the scheduled operation.

- Lead times and approval requirements are required to allow other units to be briefed on the operation (times, routes, altitudes, activities, etc.) and deconflict the proposed operation from other activities within the Complex.

- **Appendix C: Mission Planning Checklist**, is designed to be provided to CCF in order to simplify coordination of Special Activities for missions involving 10 or fewer aircraft.

CCF has the authority to designate refueling areas, ACM areas, entry/exit routes, etc., and will coordinate the proposed operation to minimize impact on other Complex users while retaining scenario realism. Final approval authority rests with the CCB.

2.5 Scheduling Special Activities

This section discusses the following special activities that are carried out within the Complex that may affect where and how other missions are flown within the Complex:

2.5.1 "Lights Out" Operations

2.5.2 Electronic Counter Measures/Chaff

2.5.3 Flares

2.5.4 Aerial Refueling

2.5.5 Supersonic Operations

2.5.6 Airborne Radar Unit (ARU)/Airborne Warning and Control Systems (AWACS) Operations

2.5.6 Tow Operations

2.5.1 "Lights Out" Operations

"Lights out" operations are allowed **ONLY within these internal restricted areas: R-2505, R-2524, R-2502N, and R-2502E**.

"Lights out" operations are NOT authorized in any other special-use airspace, including R-2508.

Units that require "lights out" operations shall contact the appropriate scheduling agency for the internal restricted area listed in Section 2.3.

- Aircrews shall advise the controlling agency when commencing and terminating "lights out" operations.
- Aircrews shall leave aircraft position lights ON while transiting to and from the scheduled restricted area. Turn lights OFF only when authorized within the internal restricted area.

A waiver to FAR 91.209 is unnecessary if the aircraft is operating in a restricted area in compliance with the using/scheduling agency's rules of operation for that internal restricted area.

2.5.2 Electronic Counter Measures/Chaff

For activities using electronic counter measures (ECM) (jamming and/or chaff) in the R-2508 Complex, you must pre-coordinate with and obtain approval from appropriate Base Spectrum Managers. Users must also inform CCF about these activities during the scheduling process.

Spectrum Managers	DSN	Commercial
WAFC, Pt. Mugu	**351-7983**	**(805) 989-7983**
AFFTC, Edwards AFB	**527-2390**	**(661) 277-2390**
NAWCWD, China Lake	**437-6827**	**(760) 939-6827**
National Training Center, Fort Irwin	**470-3280**	**(760) 380-3280**

2.5.3 Flares

Flare use is limited to internal restricted areas only and **IS NOT** authorized in R-2508 restricted, MOA, or ATCAA airspace. Flare use must be coordinated with the appropriate restricted area's scheduling agency.

2.5.4 Refueling Areas

The R-2508 Complex has three *unpublished* refueling areas (see Figure 2-4). These areas are available for use and must be scheduled with the Edwards AFB Resource Operations Center or CCF.

Refueling area definitions:

Area	Entry	Outbound	Latitude	Longitude	Frequency
Isabella	**PMD 345°/ 35**	**PMD 345R, left turns**	**35°13'N**	**118°04'30"W**	**234.825 MHz**
Coaldale	**OAL 155°/ 60**	**OAL 155R, left turns**	**37°00'N**	**117°33'W**	**252.175 MHz**
Shoshone	**BTY 150°/ 60**	**BTY 150R, left turns**	**35°50'N**	**116°26'W**	**272.175 MHz**

Cautions and Warnings!

For pilots operating in the vicinity of R-2508 Complex Refueling areas:

1. **Always use the "See-and-Avoid" principle throughout your refueling operations.**
2. Tanker areas are **NOT exclusive-use airspace** and are **NOT protected** from other Complex aircraft operating in the area.
3. **If you see a tanker formation that is not part of your operation, avoid the formation by at least 2,000 feet vertically and 5 miles horizontally.** This distance is used to reduce the risk of incident due to emergency breakaways or maneuvers by the tanker formation.
4. Request the status of refueling areas from High Desert TRACON (JOSHUA).
5. No radar coverage is available below 10,000 feet mean sea level (MSL) for the Shoshone and Coaldale refueling areas.

Figure 2-4. *Refueling and Maneuvering Areas, and Transit Routes in the R-2508 Complex.*

2.5.5 Supersonic Operations

Supersonic flight is authorized in the R-2515 High-Altitude and Black Mountain supersonic corridors (see Figure 2-5) when properly scheduled.

Supersonic flight is NOT normally authorized in R-2508, MOAs, or ATCAAs. CCB approval is required in advance.

Supersonic operations can be conducted in other internal restricted areas after receiving specific approval from the appropriate scheduling agency.

To schedule the supersonic corridors, contact the Edwards Resource Operations Center at DSN: 527-3940 / 4110.

All supersonic flight must be reported as directed by appropriate military service directives (OPNAVINST 3710.7, AFI 13-201).

Figure 2-5. *R-2515 Supersonic Corridors*

2.5.6 Tow Operations

Three categories of towed items are allowed within the R-2508 Complex:

(a) Items towed within 500 feet of tow aircraft

(b) Items towed between 500 feet and 1 statute mile from tow aircraft

(c) Items towed more than 1 statute mile from tow aircraft

Regardless of the category, all tow operations will be scheduled with CCF. In addition, the pilot will notify the controlling agency on initial contact of intent to conduct tow operations.

The following rules apply to tow operations:

1. Tow operations are only authorized in VMC conditions. Operations involving categories (a) and (b) require advance notice to the CCF IAW Special Activities scheduling procedures. **Night tow operations are limited to category (a) only**.
2. Category (b) tow operations are considered an additional hazard in the MOAs/ATCAAs and must use a chase aircraft. The chase aircraft must remain close enough to the towed item to provide a visual cue for non-participating aircraft that the towed object is between the chase and towing aircraft.
3. Category (c) tow operations (or category (b) operations where it is not feasible to use a chase aircraft) **must** be approved by a Complex Control Board-recognized Safety Review Board (SRB) or Executive Review Board (ERB) (i.e., AFFTC, NAWCWD, or NASA). Following the SRB/ERB assessment, the project must obtain CCB approval prior to flight. **These operations also require coordination with CCF at least 24 hours prior to the mission being flown.**

WARNING! **If the towed object is inadvertently released, the towing aircraft shall notify JOSHUA immediately. User should consider avoiding populated areas within the Complex while conducting tow operations.**

2.5.7 Airborne Radar Unit (ARU) and Airborne Warning and Control Systems (AWACS) Operations

Air Force AWACS will coordinate procedures and contingency plans with participating military units to ensure compliance by mission aircraft. Navy ARUs will coordinate their procedures and contingency plans with responsible Carrier Air Wing Strike Leader.

Responsibilities for both ARUs and AWACS include:

1. Provide mission frequency to JOSHUA that enables direct contact between JOSHUA and mission aircraft.
2. Obtain orbit airspace to provide service to an exercise taking place within the R-2508 Complex. Aircrews shall:
   - Coordinate with CCF for orbits within R-2508
   - Receive a Work Area Clearance from JOSHUA for orbits inside the R-2508 Complex
   - Coordinate with CCF and appropriate ARTCC for orbits outside the R-2508 Complex
3. Advise JOSHUA as soon as possible when an aircraft declares an emergency or encounters any unusual situation that requires any form of special handling. Follow these procedures:
   - Initiate a radar correlation check [Air Force AWACS].

- Maintain communications with JOSHUA on the appropriate ATC frequency or a pre-coordinated mission/tactical frequency [AWACS/ARU].
- Do not provide air traffic control services to mission aircraft (e.g., IFR services, ATC clearances, etc.) [AWACS/ARU].
- Provide coordination for squawks and call signs for inbound/outbound mission aircraft [AWACS/ARU]. However, do not change the Mode 3 discrete beacon code assignment for mission aircraft working inside the R-2508 Complex. Flight split-off aircraft not assigned a Mode 3 discrete beacon code by JOSHUA may be instructed to squawk a non-discrete beacon code while in assigned mission airspace.
- Provide mission aircraft mission support.
- Provide JOSHUA with:

– A 5-minute advance notice of mission completion

– Call sign of the first element that has completed mission operations in the R-2508 Complex

– Position of the last mission element that will exit the R-2508 Complex

- When the mission or a mission element(s) is/are completed, advise mission aircrew(s) to remain within mission-assigned airspace and contact JOSHUA on the ATC frequency.

Responsibilities for JOSHUA are to:

1. Perform all coordination with the appropriate ARTCC for inbound/outbound mission aircraft.
2. Issue a Work Area Clearance and assign a Mode 3 discrete beacon code to mission aircraft.
3. Forward mission aircraft radar data information to the AWACS/ARU to include:
   - Aircraft identification
   - Assigned discrete beacon code
4. Inactively monitor the AWACS/ARU mission/tactical frequency.
5. Provide traffic advisories, traffic alerts on non-mission aircraft operating in the R-2508 Complex, and boundary advisories on the mission/tactical frequency.
6. **NOT** provide advisories between mission aircraft.
7. Issue departure clearances and perform all associated ATC coordination with the appropriate ARTCC.

2.6 Scheduling Large-Scale Exercises

Large-scale exercises are those involving multiple-day/multiple-range activities, more than 10 participating aircraft, and/or are very complex. All large-scale exercises using the R-2508 Complex must coordinate with CCF **at least 30 days in advance** of intended operations.

Depending on the complexity, duration, and size of the exercise area, exercise planners should expect to meet one or more of the following conditions, as determined by the CCB:

1. Provide scenario of exercise plan and airspace requirements to CCF and TRACON by message, e-mail, or fax.

   Message traffic should be addressed to:

   2508CCF EDWARDS AFB CA//

   FAA HIGH DESERT TRACON EDWARDS AFB CA//

2. Coordinate in advance with FAA (ARTCCs, TRACON), Military Representatives to FAA, CCF, and/or other special-use airspace agencies.
3. Set up a mission briefing for all participating aircrews.
4. Generate an operations plan covering detailed operating procedures to which the range agency and CCF will have direct input.
5. Serve as special frequency management liaison.
6. Brief CCB for approval or stipulations for approval, if required by CCB.

NOTE: Mission planners are ***strongly encouraged*** to take advantage of CCF's extensive knowledge and experience in coordinating complex, large-scale exercises. CCF can provide users with coordination requirements, FAA ATC and flight planning requirements and recommendations to achieve overall mission success. Early contact with CCF can prevent major changes to exercise plans.

Most large-scale exercises require the use of airspace/land ranges managed by various members of the Joint Policy and Planning Board (JPPB). Planners must formulate the desired exercise plan along with alternative options as early as possible in order to coordinate mission requirements and negotiate exercise approval.

Most airspace coordination may be handled through the agencies listed in Section 2.3. The following list of organizations that may require separate or additional coordination:

Agency	DSN	Commercial
Air Force Representative to FAA Western-Pacific Region	**833-0481**	**(310) 725-3900**
Navy Representative to FAA	**833-1247**	**(310) 725-3910**

Agency	DSN	Commercial
Western-Pacific Region		
Army Representative to FAA Western-Pacific Region	**833-1250**	**(310) 725-3908**
Los Angeles ARTCC Military Liaison	**640-1290**	**(661) 265-8280**
Oakland ARTCC Military Liaison	**730-1595**	**(510) 745-3334**
High Desert TRACON	**527-2023**	**(661) 277-2023**

2.7 Operating Remotely Operated Aircraft (ROA)

To receive approval for Remotely Operated Aircraft (ROA, which also include UAVs and UCAVs) operations in the R-2508 Complex, submit a detailed proposal to the CCB via the CCF and the appropriate Safety Review Board (SRB) or Executive Review Board (ERB) listed in subsection 2.7.2.

All ROA operations within shared-use airspace require CCB approval that is not delegated.

The proposal should attempt to follow the basic guidelines below that are already approved by the CCB, but each program will be evaluated on a case-by-case basis and approval is contingent upon airworthiness, system maturity, and/or flight safety mitigators (e.g., flight termination system, chase, direct operator control with good comm. links to TRACON, etc.).

This section discusses CCB guidelines that will help ensure that you submit a thorough proposal in enough time for adequate review and advance coordination. If the operations are highly complex or if the proposal deviates significantly from the guidelines below, you should allow more time for coordination.

The guidelines are discussed as follows:

2.7.1 Proposal Submission Timelines

2.7.2 Safety Review

2.7.3 Scheduling and Coordination

2.7.4 Post Mission Evaluation

2.7.1 Proposal Submission Timelines

The recommended submission timelines depend on the following:

Type or Part of Program	Submittal Prior to Operations	Reason for Submittal

Type or Part of Program	Submittal Prior to Operations	Reason for Submittal
• Initial contact for a new program • Significant changes to an existing program	**At least 6 months**	• Coordination of Letter of Agreement (LOA)* • CCB consideration and approval
• A previously coordinated program, inactive for over 6 months	**At least 60 days**	• Coordination with CCF
• Final profile and scheduling	**At least 7 days**	• CCF will evaluate and may require schedule changes to minimize impact on other missions (see scheduling process below).
• Profile changes	**At least 3 days**	• Time to brief affected agencies. Changes not received in this time may affect airspace availability.

*LOA coordination takes at least 90 days from the original written request. The LOA depends on CCB agreement with the proposed operating procedures and the results of the Safety Review (discussed below). The LOA is usually worked concurrently with other coordination.

2.7.2 Safety Review

An CCB-authorized review organization (AFFTC, NASA Dryden SRB, or NAWCWD ERB only) will review the proposal for safety in accordance with current SRB or ERB governing instructions and applicable internal range procedures.

The reviewing organization shall, at a minimum, consider the CCB guidelines established below or provide an SRB/ERB-recommended equivalent level of safety. When submitting the proposal, address the elements and mitigation's covered in the Safety Review.

This requirement also applies to operational ROAs proposing to operate within shared-use airspace.

As a minimum, all ROAs operating in shared-use airspace are expected to carry an operable transponder with mode C capability and have some demonstrable means of responding to JOSHUA requests for altitude and/or heading changes in a timely manner.

The Safety Review shall assess the following:

1. Requirement for fight termination system and written procedures addressing when it will be used. Procedures shall address at least the following:
   - Need for redundancy in transponders and flight termination system (RCC 319-92, 313-94)
   - Description of basic conditions that may result in flight termination (e.g., loss of signal, specific data link command, flight plan deviation, etc.)
   - Methodology for termination (e.g., break-apart, parachute recovery, etc.)
   - Determination that footprint from flight termination will not impact no-fly areas (see specific flight plan profile guidelines)
2. Specific flight plan (path, altitude, and speed) profiles. The profiles should:
   - Identify all affected airspace.
   - Describe methodology of controlling the ROA; e.g. man-in-the-loop, autonomous flight plan, etc.
   - Incorporate the no-fly areas (developed by CCB) to avoid direct overflight or flight termination in these areas.
   - Avoid sharp turns within 5 NM (or greater, dependent on ROA's operational limits) of the adjacent non-shared use airspace boundary. Plan for turns to be completed no less than 3 miles from the airspace boundary.
   - State that operations will remain in VMC during all flight (including chase aircraft). If no chase aircraft, then operations will be nominally be limited to at or above FL450 in shared-use airspace if system reliability allows.
   - When chase aircraft is required, it must be joined up with the ROA before leaving internal restricted areas or Class D airspace, as appropriate.
   - Ensure that the minimum altitudes are not less than those required by this Handbook and the FARs.
   - State your willingness to operate in a "see-and-avoid" environment. Requests for exclusive use operations will normally **not** be approved in shared-use airspace (see guidance in this Handbook).
   - State operational constraints (i.e., distance from control vehicle, speeds, rate of turn, rate of climb or descent).
   - Include procedures to change heading or altitude for traffic conflict or weather and the proposed coordination process (include timeliness of response to requested action). It is normally expected that JOSHUA can directly communicate with the ROA controller in such a manner that changes in heading and/or altitude can be made in a timely manner.

NOTE: You may need to coordinate operations through a program representative located in TRACON. This capability should be addressed in the proposal.

- Describe sensor operations and coordination with OPSEC.
- State duration of flight.
- Identify departure and planned recovery location(s).

3. Chase aircraft requirement and procedures. Include:
   - Flight termination and ROA takeover guidance capabilities
   - Standoff distance from ROA
   - Operational limitations, if any, on the chase aircraft
   - Communications capabilities (with ground facilities and ATC)
   - Process for affecting control of the ROA (direct or via ground facility)
   - Join-up procedures, if not immediately after ROA is airborne
   - Chase aircraft and ROA operator briefing on Complex procedures
4. System maturity.
   - Describe prior operations or programs that may indicate the reliability of the system and data link in a similar configuration and operational scenario to that planned. An approved Airworthiness Certificate is a requirement for all proposed ROA configurations (this is a separate document from a "Certificate of Authorization"). Proof-of-concept flights should be, to the maximum extent possible, contained within internal restricted areas until basic airworthiness has been demonstrated.

     New concept and/or low systems maturity ROAs are expected to carry a flight termination system and be chased while operating within shared-use airspace, regardless of altitude. Demonstrated mature systems may be allowed to operate without chase or flight termination system throughout the shared-use airspace contingent upon the recommendation of the appropriate SRB/ERB and approval by the CCB.
   - Include contingency procedures (may be linked to flight termination) to address at least the following:
   - Loss of internal navigation
   - Loss of signal uplink
   - Loss of control of the ROA or the control link with JOSHUA
   - Signal interference (based on Spectrum Management review of proposed frequencies)

- Proposed resulting action or programmed response for deviations from the flight path. For ROAs that depend on a flight termination signal, address what happens when you are unable to initiate the abort process.
- Loss of tracking (position unknown)
- Loss of transponder (address redundancy requirements)
- Unsatisfactory performance: Does it create a safety hazard or is reliability downgraded?
- DoD or other directed requirement to RTB early (incomplete or interrupted flight plan)
- Loss of control van power; discuss redundancy of power supply to control van or backup unit for control
- FAA coordination/authorization and any operational restrictions that may exist

• Describe your basic recovery plan. Include security issues and coordinating access (see CCB/Land Management Agencies LOA). Address access to DoD lands (internal restricted areas) if this access is not pre-coordinated as part of the flight plan.

• Describe the need for or the accomplishment of the environmental assessment for the proposed activity.

2.7.3 Scheduling and Coordination

Once you receive CCB approval for your ROA operations, and a Letter of Agreement (if required) and all procedures have been finalized between the project, High Desert TRACON, and the CCB, **you must still coordinate and schedule individual operations in the appropriate airspace with the CCF and/or appropriate internal range scheduling activity.**

2.7.4 Post Mission Evaluation

Projects are encouraged to perform a post mission evaluation that discusses the benefits and/or constraints, of the R-2508 UAV/ROA safety review process, and repot them to the CCB.

2.8 Flight Planning

Refer to ***DoD FLIP*** for flight plan filing requirements to land at installations located within the R-2508 Complex. All aircrews filing to land or planning to operate in the Complex must understand and operate in accordance with the R-2508 Complex concept explained in Section 3.1.2 of this Handbook.

- All scheduled operations originating outside the R-2508 Complex shall file in accordance with the following procedures unless the flight will terminate at an installation within the R-2508 Complex.
- These procedures shall be followed to ensure availability of an IFR clearance when flights are ready to RTB. Failure to comply may result in a delay in the Complex while JOSHUA attempts to obtain an IFR clearance.

Call Signs

Call signs provided to CCF for activities in the R-2508 Complex shall not exceed 7 characters/numbers and shall be the same as filed on a DD-175. Two-letter abbreviated call signs, such as BH-1 for "Bloodhound 01," will be interpreted and broadcast as "BRAVO HOTEL 01" by Air Traffic Control (ATC). Tactical call signs shall not exceed 7 characters/numbers and shall be a pronounceable word, in accordance with *DoD FLIP, General Planning (GP), Flight Plans*.

2.8.1 DD Form 175, Military Flight Plan

To file IFR to/from R-2508 Complex (see below):

1. File Two IFR flight plans or legs, one to enter and one to depart the R-2508 Complex.
2. To ensure proper flight plan processing for JOSHUA, **flights not intending to land at an airport within the R-2508 Complex should file "R-2508" as the destination and point of departure for the return flight plan/leg.**

DATE	AIRCRAFT CALL SIGN	AIRCRAFT DESIGNATION
04/01/00	TEST 01	F-22/R

TYPE FLT PLAN	TRUE AIRSPEED	POINT OF DEPARTURE	PROPOSED DEPARTURE TIME (Z)	ALTITUDE	ROUTE OF FLIGHT	TO	ETE
I	450	NFL	1900	290	OAL..EWALD	R-2508	0+15
I	450	R-2508	2000	290	EWALD..OAL	NFL	0+15

Figure 2-6. *Sample DD Form 175, Military Flight Plan.*

3. Aircraft landing or departing from an airport within the R-2508 Complex should file that airport as the destination and/or departure point of the flight plan.
4. The point of entry/exit into R-2508 airspace should be an R-2508 Entry/Exit fix (see Figure 2-7) as listed in subsection 2.8.2. This does not preclude ATC from clearing aircraft to enter/exit other R-2508 Complex boundary locations.

NOTE: Filing a flight plan <u>does not</u> relieve the aircrew of the responsibility for scheduling the appropriate airspace with CCF.

For VFR flights:

1. Obtain a Work Area Clearance from JOSHUA/SPORT before conducting operations in the R-2508 Complex.
2. All Complex aircraft shall advise JOSHUA/SPORT before departing R-2508 Complex airspace.

2.8.2 R-2508 Complex Entry and Exit Points

Name	Radial/DME	Latitude	Longitude
FAANG	NLC 043º/ 77	37º00'00"N	118º35'03"W
EWALD	BTY 274º/ 71	37º12'00"N	118º07'48"W
HAMBO	BTY 283º/ 50	37º12'00"N	117º38'33"W
HARNE	BTY 274º/ 27	36º55'25"N	117º11'15"W
JENID	BTY 175º/ 27	36º21'15"N	116º51'30"W
HEINY	BTY 154º/ 58	35º51'30"N	116º32'33"W
DAGGS	EDW 076º/ 38	34º59'00"N	116º57'00"W
ROSIE	PMD 317º/ 15	34º51'08"N	118º12'23"W
CHADS	EDW 277º/ 47	35º15'00"N	118º35'00"W
ROMOF	*NID 267º/ 44	35º49'00"N	118º35'03"W
SWOOP	NLC 075º/ 67	36º19'00"N	118º35'05"W
KIOTE	NLC 062º/ 68	36º34'20"N	118º35'24"W
MITEL	CZQ 086º/ 61	36º41'03"N	118º35'03"W

NID TACAN is unmonitored when China Lake airfield is closed.

Figure 2-7. *R-2508 Complex Entry/Exit Points.*

Chapter

3

3.0 R-2508 Flying Procedures

This section discusses the following:

3.1 Flying Procedures

3.2 Special Considerations

3.1 Flying Procedures

All Complex users must understand and become familiar with the R-2508 Complex procedures. Due to the uniqueness of the Complex, the controlling agencies have prepared specific operating procedures to coordinate proper planning and ensure operations comply with procedures and restrictions.

All users of the R-2508 Complex shall comply with the following procedures, unless otherwise coordinated:

1. **Briefings.** All users shall be briefed and knowledgeable of R-2508 Complex operating procedures applicable to their mission. CCF provides briefings through telephone contact with individual flights or face-to-face briefings for large groups or Squadrons.

   ****Commanders of units flying in the R-2508 Complex are responsible for ensuring their aircrews are briefed annually on R-2508 Complex procedures****

   - Users include participating aircraft transiting the airspace to installations located within the R-2508 Complex.
   - Civilian aircrews operating under an R-2508 Complex Letter of Agreement (LOA) are required to comply with the briefing requirements and operating procedures defined herein, except as modified by the terms of the LOA.

2. **Participating Aircraft.** "Participating aircraft" are defined as those aircraft under the command of, or sponsored by, the Navy, Air Force, or Army members of the R-2508 Joint Policy and Planning Board (JPPB), and civilian aircraft under Letter of Agreement approval of the R-2508 Complex Control Board (CCB), and accept the terms and conditions of the R-2508 Complex procedures.

3. **Non-Participating Aircraft.** "Non-participating aircraft" are defined as aircraft that cannot comply with the terms of the R-2508 Complex procedures. These aircraft shall be provided IFR services, as specified in FAA handbook 7110.65 and FAA order 7610.4, on a non-interference basis, and can expect to encounter delays.

3.1.1 Specific Procedures

These operating procedures apply to military aircraft and other authorized flight activities (in accordance with an approved LOA) that operate within R-2508, MOAs, ATCAAs, and internal restricted areas as participating aircraft.

1. **All aircraft within R-2508, MOAs, or ATCAAs shall operate VFR**.
   - If unable to maintain VFR, aircraft shall advise TRACON (call sign "JOSHUA"), China Lake Airspace Surveillance Center (ASC) (call sign "CHINA CONTROL"), or Edwards AFB Radar Control Facility (RCF) (call sign "SPORT"; frequency 272.0/132.75 MHz) and request an amended Work Area Clearance from VFR to IFR to reach VFR conditions.
   - The **only** condition under which a participating aircraft will be issued an IFR clearance to continue operations within the R-2508 Complex is if the aircraft encounters weather conditions that are below the minimum for flight under VFR, and is unable to proceed under VFR.
   - The purpose of an IFR clearance is to position the aircraft in weather conditions that permit VFR flight to exit the area or to return to base if unable to locate VFR conditions.
   - After re-encountering VFR weather, the aircrew shall be responsible for canceling IFR clearance.
2. **Operate on the "see-and-avoid" concept.** Scheduling or receiving a clearance to operate within the R-2508 Complex does not constitute exclusive use of the area.
   - Those operations requiring exclusive use will normally be conducted within internal restricted areas. On very rare occasions, exclusive use of R-2508 Complex airspace may be granted by the CCB within well-defined boundaries. This authority is never delegated below the CCB.
3. **All participating aircraft operating in the R-2508 Complex area are required to have an operational transponder and Mode C, unless otherwise pre-coordinated.**
   - All aircraft shall remain on the ATC-assigned transponder code while operating in the R-2508 Complex unless otherwise directed by ATC.
   - The flight lead for standard formation flights shall squawk normal and wingman shall squawk standby.
   - Upon breakaway into elements or individual flights, the element lead or individual aircrew shall set the transponder in accordance with the following:
   - Advise TRACON of breakaway elements' call sign(s), number and type of aircraft, and request beacon code assignment.
   - Advise TRACON if traffic calls are required between elements.

4. **Aircraft shall accept traffic advisories from JOSHUA, CHINA CONTROL, or SPORT unless otherwise coordinated.** Controllers shall issue traffic advisories, safety alerts, and boundary calls as their workload permits.
   - Aircraft operating in support of **R-2505, R-2506 or R-2524** operations will normally be provided radar advisory services by **CHINA CONTROL**.
   - Aircraft operating in support of **R-2515** operations will be provided radar advisory service by **SPORT**.
   - Aircraft operating in support of **R-2502** operations will be provided traffic advisory service by **SUNDANCE**.
   - When no longer under control of SPORT or CHINA CONTROL, ***aircraft shall contact JOSHUA to continue operations within or to exit the R-2508 Complex***.

5. **Flights shall maintain two-way radio communications with ATC on the appropriate frequency unless otherwise coordinated.** Carry out intra-flight communications on a secondary radio.

3.1.2 Operating Procedures

These operating procedures apply to all aircraft within R-2508, MOAs, ATCAAs, and internal restricted areas:

1. **All aircraft shall obtain a Work Area Clearance prior to operating within the R-2508 Complex.**
   - All flights shall contact JOSHUA on a Work Area Frequency (see below) prior to Complex entry and exit. Initial contact shall include a request for a Work Area Clearance and altitudes.

Work Area	Frequencies
ISABELLA	**335.6 / 134.05**
(ATC Primary)	**348.7 / 133.65**
OWENS	**322.3 / 126.55**
SALINE	**256.8 / 123.95**
PANAMINT	**291.6 / 120.25**

   - **JOSHUA will issue appropriate Work Area Clearances to allow flights to operate VFR in the R-2508 Complex and will normally be given in an abbreviated format as follows:**

– ***SAGE 2:*** Specifies a clearance to operate within the Isabella **(excluding the Inyokern Transition Area during active times, 0500-0700, 1100-1300, and 1800-2400 daily, Local time)**, Owens, Saline, and Panamint Work Areas at and below FL290. Aircraft shall schedule and request (real time with JOSHUA) higher altitudes.

Sample Phraseology**:** ***"Cleared Sage 2"***

NOTE: It is the sole responsibility of the pilot in command to know the Inyokern Transition Area active times and abide by the above clearance.

– ***PANCHO 2:*** Specifies a clearance to operate within the Isabella **(excluding the Inyokern Transition Area during active times, 0500-0700, 1100-1300, and 1800-2400 daily, local time)**, and the Panamint Work Area at and below FL500, the Owens and Saline Work Areas at and below FL290. Edwards aircraft only: Barstow MOA, Barstow East at and below FL230, and Barstow West at and below FL500. Aircraft shall schedule and request (real time with JOSHUA) higher altitudes.

Sample Phraseology: ***"Cleared Pancho 2"***

NOTE: Only *locally based* aircraft (Edwards AFB, NAWC China Lake, AIRTEVRON NINE [VX-9] and Palmdale [Plant 42]) are authorized to use a PANCHO 2 Clearance.

– ***WAR 1:*** Specifies a clearance to operate within the Saline, Panamint, Shoshone North and Shoshone South, Barstow East and Barstow West work areas, **at and below FL230**. Aircraft that schedule and request (real time with JOSHUA) higher altitudes can expect clearance to those altitudes within 15 minutes.

Sample Phraseology: ***"Cleared War 1"***

NOTE: ONLY aircraft scheduled through Air Warrior and operating in support of NTC FT. Irwin rotational exercises are authorized a WAR 1 Clearance. It is the responsibility of the pilot in command to schedule to operate within R-2502N/E.

- Clearances into work areas other than the above areas will be issued in addition to the normal Sage 2. However these areas must be scheduled and requested real time with JOSHUA.
- **JOSHUA will not clear aircraft into internal restricted areas.** It is the responsibility of the pilot in command to ensure the unit is properly scheduled and knows the appropriate procedures for entry into R-2502N/E, R-2505, R-2515, and R-2524.

As with any Work Area Clearance, aircrews are responsible for remaining within the vertical and lateral confines defined by the clearance. If the aircraft leaves the vertical or lateral confines of the clearance, a flight violation may be filed.

NOTE: Aircrews issued Work Area Clearance altitudes lower than mission requirements **must** request higher altitudes from JOSHUA.

2. **Aircraft shall remain on the assigned local altimeter while operating in the R-2508 Complex, regardless of altitude.** The facility altimeter to use in specific areas is included with the information about each area (see Chapters 4, 5, and 6).
3. **Participating aircraft departing the R-2508 Complex shall maintain VFR until crossing the R-2508 Complex boundary.**
4. **Flight crews are responsible for obtaining an enroute clearance prior to departing Complex boundaries IFR.** If departing VFR, advise TRACON.
5. **JOSHUA is not responsible for providing IFR separation between participating IFR and VFR traffic operating in the R-2508 Complex.** TRACON shall provide IFR separation between all IFR participants and those non-participating aircraft operating on an IFR clearance.
6. **Active and Inactive monitoring of mission frequencies depends on availability of radio resources at JOSHUA.**
   - ***Active Monitoring.*** JOSHUA tunes the transceiver to the mission frequency requested, listens on the frequency, and makes traffic/boundary calls on mission frequency. JOSHUA also offers continuous direct pilot-to-controller communications on mission frequency.
   - ***Inactive Monitoring.*** JOSHUA tunes transceiver to mission frequency requested but does NOT listen on frequency. Traffic and boundary calls will be made on mission frequency as needed. Direct pilot-to-controller communications requires the pilot to switch to an ATC frequency (i.e., amended clearances, aircrew request, or prior to exiting the R-2508 Complex).
7. **Aircraft not operating on a mission/tactical frequency shall, unless otherwise advised, monitor the appropriate work area ATC discrete frequency**.
   - When using Maneuvering Areas (see Figure 2-4) for ACM or any other mission requiring extensive maneuvering, advise JOSHUA of the area.
   - When conducting ACM, aircrews should be aware of noise-sensitive areas that must be avoided to the maximum extent possible.
8. When transiting Maneuvering Areas en route to work areas or RTB, make every effort to use ridgeline transit routes (see Figure 2-4) and/or fly below 5,000 feet AGL to deconflict with possible maneuvering activities.

9. Beware that low-level flying activities are conducted at altitudes below the radar horizon and in areas with marginal communications coverage. This reduces the ability of JOSHUA to provide traffic advisories.

    - **To assist aircrews in avoiding traffic conflicts, a dedicated low-level UHF frequency, 315.9 MHz has been established**.

10. The procedures for using this frequency are similar to UNICOM in concept and allow aircrews to inform other aircrews of their mission and intentions, and to coordinate and deconflict as necessary. **JOSHUA does NOT monitor this frequency**.

3.1.3 Low-Level Flying

The following procedures have been implemented to enhance flight safety within the R-2508 Complex and should be used by aircrews involved in sustained flight at low altitudes:

All aircrews engaged in low-level flight activities below 1,500 feet AGL in the R-2508 Complex work areas SHALL use 315.9 MHz to the maximum extent possible.

- Aircrews shall check in and out on an ATC frequency with JOSHUA and request to change to the low-level frequency. Dual radio aircraft shall continue to monitor appropriate ATC or mission frequency.
- Calls will be made in the blind using call sign, number, and type aircraft, area entering/departing, and direction of flight.
- Transmissions on the low-level frequency are normally made when:
    - Initially entering Panamint, Saline, Owens, and Kern River Valleys; Owens Dry Lake; the saddle between Saline and Panamint valleys; and Walker Pass.
    - Deconflicting traffic when two missions are operating in the same area. Call periodically when conducting low-level flight for an extended period of time in an area such as Panamint or Saline valleys.
    - Checking out of an area or from low-level flight.
- In cases where multi-ship flights include aircraft equipped with a single radio, one aircraft should be equipped with multiple radios. This aircraft is responsible for monitoring the low-level frequency and providing the necessary coordination to the single radio aircraft in the flight to deconflict the flight's activities with other aircraft operating in the area.

Aircraft from Land Management agencies (U.S. Forest Service, National Park Service, and Bureau of Land Management) have a communications relay (FM 168.625 MHz) to monitor the R-2508 low-level frequency (315.9 MHz) when within communications coverage of the U.S. Forest Service Sherman Peak and Silver Peak radio communications sites. This relay allows a land management aircraft broadcast on 168.625 MHz to be rebroadcast to military aircraft on 315.9 MHz, permitting two-way communications between the military and fire-fighting aircraft.

3.2 Special Considerations

Special considerations include:

- Severe Weather Areas
- Open Skies Treaty Flights
- Reporting Suggestions for General Complex Changes (R-2508 Situation Report)

3.2.1 Severe Weather Areas

The Severe Weather Areas were developed to provide a method by which the FAA could request portions of the R-2508 Complex during periods of inclement weather. By letter of agreement, the FAA can request portions of R-2502N/E, R-2515, R-2524, Isabella, Barstow, and Panamint Work Areas.

- The Severe Weather Areas are requested and released by specific altitude blocks and times (i.e. Area 4 at or above FL290). If required CCF can reactivate **any** released airspace in 20 minutes.
- Severe Weather Areas will only be released to the FAA with the consent of the using agencies after close examination of mission requirements of scheduled users.

Users should carefully consider mission requirements when responding to requests to release portions of their scheduled airspace. Aircrews shall be familiar with the dimensions of the Severe Weather Areas.

Area Definitions are as follows:

Area (1)	That portion of R-2515 that lies East of the boundary formed by following the NID 152° radial from 35°21'25"N/117°35'31"W direct to 34°51'14"N/117°26'36"W, then continuing east to encompass the Barstow MOA, Barstow East and Barstow West ATCAAs. This includes the overlapping portion of R-2515 and the Barstow MOA/ ATCAAs that are part of Area 5.
Area (2)	That portion of R-2515 that lies West of the boundary formed by following the NID 152° radial from 35°21'25"N/117°35'31"W direct to 34°51'14"N/117°26'36"W. This includes the overlapping portion of R-2515 that is part of Area 5.
Area (3)	That portion of the Isabella MOA/ATCAA that lies southwest of the PMD 330° radial, from 36°06'31"N/118°35'04"W south along the western most boundary of R-2508 to 34°48'40"N/118°07'34"W direct to point of beginning.
Area (4)	That portion of the Panamint MOA/ATCAA that lies southeast of the BTY 182° radial, from 36°26'04"N/116°53'05"W southeast along the eastern most boundary of R-2508 to 35°34'30"N/116°23'33"W. Thence along the northern boundary of R-2502N to 35°37'45"N/116°55'23"W, then north along the boundary of R-2524 to 35°47'45"N/116°55'23"W direct to 35°47'47"N/117°02'12"W direct to point of beginning.

Area (5)	That portion of R-2515 that lies south of the FIL 049° radial, from 34°48’00”N/117°47’28”W direct to 35°11’03”N/116°49’03”W, then continuing south to encompass the Barstow MOA, and the Barstow East and Barstow West ATCAAs.

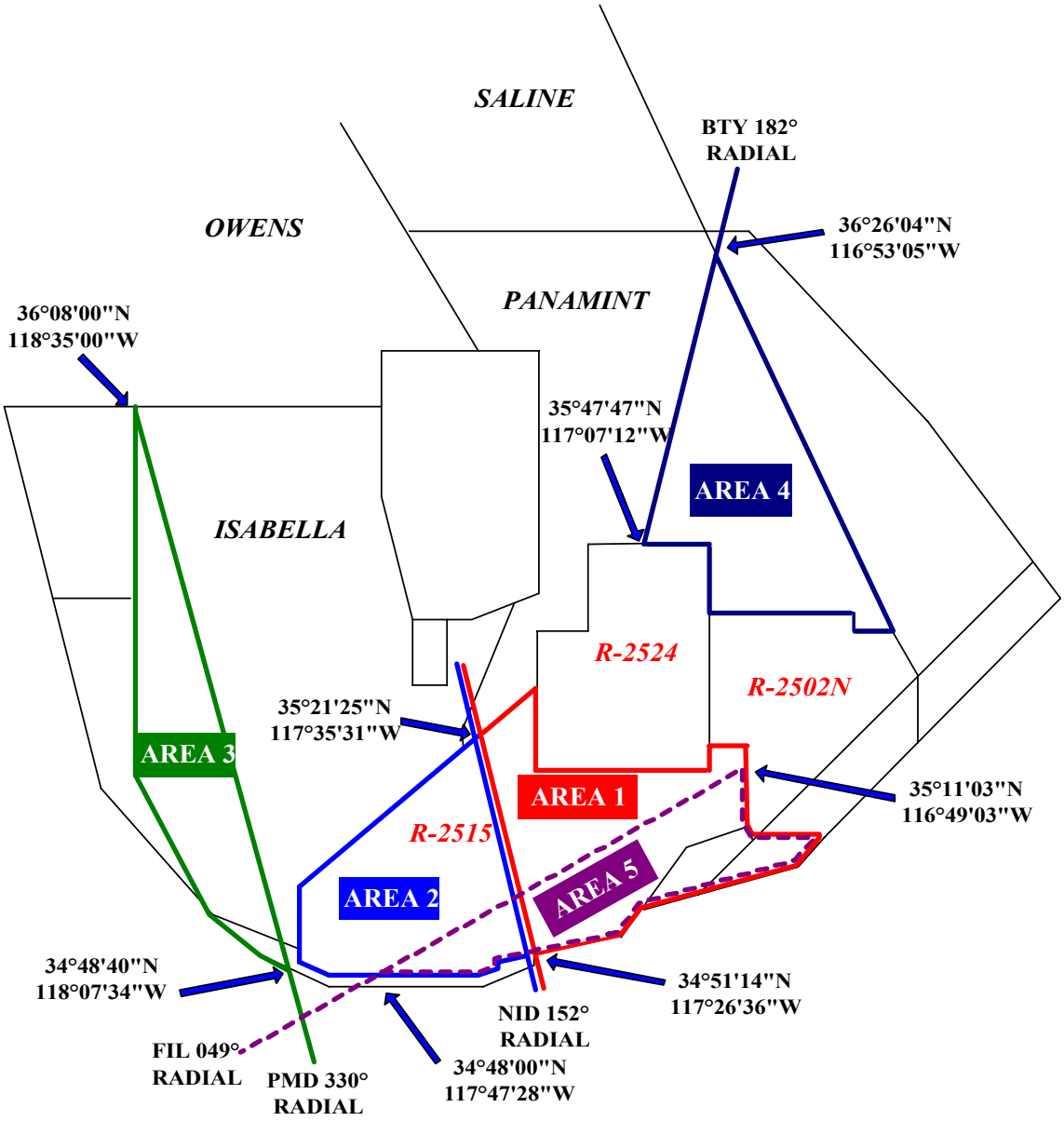

Figure 3-1. *Severe Weather Areas*

3.2.2 Open Skies Treaty Flights

The United States Senate ratified the Open Skies Treaty in 1994. Under the terms of this treaty, signatory countries are authorized to operate aircraft equipped with sensors selected from an approved suite, over all national territories of the visited country. These conditions permit access to all United States airspace without restriction. The foreign overflights may be conducted from either the U.S. Open Skies platform (OC-135) or the visiting country's aircraft.

NOTE: Treaty provisions state that Open Skies flights take precedence over regular air traffic and allow flights through all Special Use Airspace.

CCF is the single point of contact to High Desert TRACON, users, and controlling agencies for notification of proposed Open Skies flights in the R-2508 Complex. **Upon notification, CCF will advise users/agencies of the intended flight path through Complex airspace.**

- All users and agencies should be prepared to review and, if necessary, modify their flight requirements for R-2508 Complex airspace based on the proposed overflight window.
- Notice of the actual times and airspace affected by the Open Skies flight plan will be identified by CCF, as those details become available.

3.2.3 Reporting Suggestions for General Complex Changes (R-2508 Situation Report)

The R-2508 Situation Report (R-2508 Form 1), **Appendix D**, provides R-2508 Complex users, controllers, and other interested parties with an informal method to identify and report circumstances or services that enhance or degrade their mission within the R-2508 Complex.

The R-2508 Situation Report (Sitrep) provides R-2508 Complex management with informal user feedback and points out the positive aspects or needed changes to operating policies and procedures. Support by R-2508 Complex users is vital for this program to be effective.

***Timely submission of Sitreps are critical to improving policies, procedures, and ensuring continued safe operations within the R-2508 Complex.**

NOTE: The information contained in the R-2508 Situation Report is for *Military Use ONLY* and for the exclusive purpose of improving air operations within the R-2508 Complex. The information (call signs and crew names) contained within the R-2508 Situation Report **SHALL NOT** be released.

This form does not replace formal reporting procedures such as the Hazardous Air Traffic Report (HATR), Operational Hazard Report (OHR), Hazard Reports (HAZREPS) or Near Mid-Air Collision Report (NMAC), nor does it address situations that will be reported and handled as flight or controller violations.

To submit a Sitrep:

1. Submit the information via the R-2508 Website (**http://r2508.edwards.af.mil)**, or download the form.
2. E-mail, fax, or mail all pages to CCF (sees page 1-1 for address and message information).

Upon receipt, CCF will:

1. Notify the submitter upon receipt.
2. Process the report for situation analysis and recommendations.
3. Submit the report and findings to the CCB.

The CCB will assign appropriate action for each situation.

Chapter

4

4.0 Operating Procedures for R-2508 Major Work Areas

This chapter discusses the operating procedures for the following:

4.1 Isabella MOA/ATCAA

4.2 Owens MOA/ATCAA

4.3 Saline MOA/ATCAA

4.4 Panamint MOA/ATCAA

This chapter covers the following for each specific work area:

- Description and Operations
- Special Considerations
- Dimensions

The scheduling agency for these MOAs/ATCAAs is the CCF:

Hours of Operation		Contact Numbers
0600–1800 M-F	Phone:	DSN 527-2508 (661) 277-2508
	Fax:	DSN 527-4798 (661) 277-4798
	E-mail:	**2508CCF@edwards.af.mil**

Published hours of activation for all MOAs and ATCAAs are:

Monday to Friday, 0600–2200(L), All other times by NOTAM.

4.1 Isabella MOA/ATCAA

4.1.1 Description and Operations

The Isabella MOA covers 200 feet AGL to FL180 and the ATCAA covers FL180 to FL600 (see Figures 2-1 and 2-2). Isabella is typically used for the following activities:

- Primary holding point for armed aircraft using R-2505 and test aircraft using R-2524 Research, Development, Test, and Evaluation (RDT&E) and Operational Test and Evaluation (OT&E)
- Rapid maneuvering and ACM conducted over Saltdale/Koehn Lake (heavy use by Edwards AFB at all altitudes)
- Arrivals and departures from NAWS China Lake (R-2505)
- Orbit of refueling aircraft in support of restricted area operations
- Crossing of several Military Training Routes (MTRs) (see Figure 4-2)

4.1.2 Inyokern Transition Area

The Inyokern Transition Area (ITA) (Figure 4-1) is an area in the Isabella MOA developed to segregate FAR Part 121 (Air Carrier) aircraft from Complex users.

All participating aircraft are excluded from the ITA between (all times Local) 0500-0700, 1100-1300, and 1800-2400 daily, unless specifically approved by ATC.

During published operating hours, you may request the use of the ITA in two ways:

1. **Request transit of the ITA**. This is a request to cross the area on a one-time basis.
2. **Request to operate within the ITA**. This is a request to allow an aircraft to operate within the area for a given amount of time. The clearance to operate within the ITA will normally be given with a void time (time that the aircraft must be clear of the transition area).

NOTE: All clearances (i.e., Isabella, Sage 2, and Pancho 2) specifically exclude the ITA between (all times Local) 0500-0700, 1100-1300, and 1800-2400, daily.

The Part 121 aircraft makes six flights to and from Inyokern each day (three arrivals and three departures). Each flight takes approximately 15 to 20 minutes to transit the ITA.

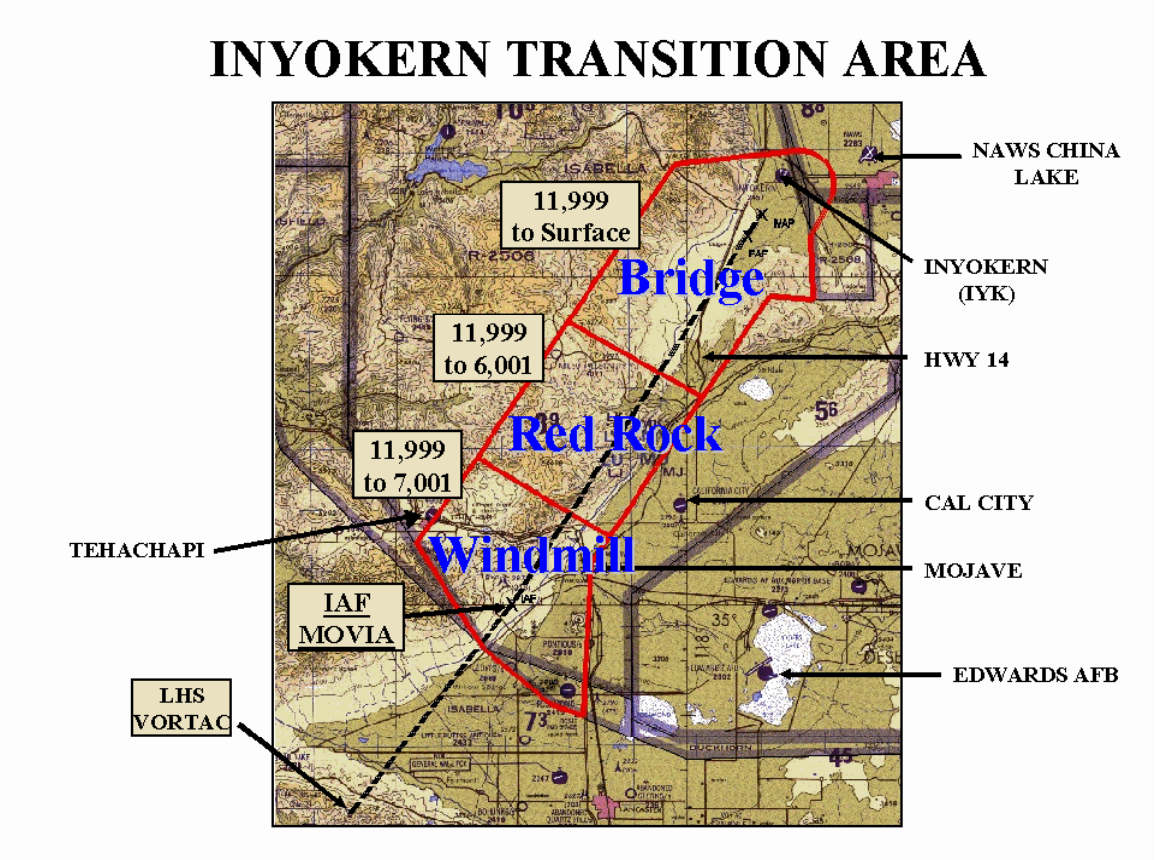

***Figure 4-1**. Inyokern Transition Area.*

4.1.3 Special Considerations

Aircraft use the Edwards AFB local altimeter.

Altitudes in the MOA exclude the airspace up to and including 3,000 feet AGL floor over Domeland Wilderness Area, as it existed in 1977. The airspace also excludes the airspace up to and including 1,500 feet AGL within a 3 NM radius of the following airports:

- Rosamond
- Lloyds
- California City
- Tehachapi
- Inyokern-Kern County
- Kelso Valley Ranch
- Flying S Ranch
- Kern Valley
- Sacatar-Meadows
- Mountain Valley
- Kern County

***The MOA excludes the airspace up to and including 4,800 feet MSL within a 4.3 NM radius of the Mojave Airport, excluding that airspace east and parallel to a line ½ mile west of R-2515.**

Figure 4-2. *Military Training Routes (MTRs) and Highways.*

Also, see Chapter 7, *R-2508 Complex Description and Use*, for more details concerning the following activities:

- Sailplane
- Ultralight

- General aviation VFR Transit routes (see Figure 7-3)
- Parachute
- Land Management helicopters and fixed-wing aircraft
- Populated areas: Inyokern, Lake Isabella, Kernville, Johannesburg, Randsburg, California City, Mojave, Sacatar (see Figure 7-6)
- Mojave Airport Class "D" Airspace
- Randsburg Mine (blasting)
- Trona Controlled Firing Area (CFA/Trona Corridor)
- Severe Weather Area (3) (see subsection 3.2.1)

4.1.4 Dimensions

The dimensions of the **Isabella MOA** are:

Beginning at 36°08'00"N/118°35'03"W;
thence direct 36°08'00"N/117°53'03"W;
thence south and east along the boundary of R-2505 to
35°39'15"N/117°29'26"W;
thence direct 35°21'00"N/117°38'33"W;
thence direct 35°19'20"N/117°38'33"W;
thence along the western boundary of R-2515 to
34°49'40"N/118°05'48"W;
thence direct 34°48'00"N/118°05'48"W;
thence direct 34°51'00"N/118°14'03"W;
thence direct 34°56'00"N/118°21'03"W;
thence direct 34°15'00"N/118°35'03"W;
thence direct to the point of beginning.

Dimensions for the Inyokern Transition Area and its subdivisions are:

Inyokern Transition Area: The starting point is the established Inyokern Shelf. Point A is the eastern most point at which an aircraft could be to complete the approaches.

Beginning at point B	35°41'30"N/117°48'50"W	Ref. IYK Shelf
thence a 3 NM arc from point A	35°38'30"N/117°48'30"W	Ref. IYK Shelf
to point C	35°37'30"N/117°45'00"W	Ref. IYK Shelf
thence direct point D	35°33'45"N/117°47'20"W	Ref. IYK Shelf
thence direct point E	35°28'00"N/117°47'03"W	Ref. FAAO 7400.8
thence direct point F	35°28'15"N/117°51'30"W	
thence direct point G	35°19'00"N/117°58'30"W	
thence direct point H	35°06'20"N/118°08'03"W	
thence direct point I	35°03'50"N/118°10'00"W	

thence direct point J	34°50'00"N/118°10'50"W	
thence direct point K	34°51'00"N/118°14'03"W	Joint Use Letter of Procedure
thence direct point L	34°56'00"N/118°21'03"W	
thence direct point M	35°05'40"N/118°28'00"W	
thence direct point N	35°13'25"N/118°21'45"W	
thence direct point O	35°25'55"N/118°12'25"W	
thence direct point P	35°40'20"N/118°01'20"W	

thence direct to point B (the point of beginning).

The following areas divide the ITA by altitude and protect descent on the approaches:

Windmill Area: The airspace from the Southwest boundary of the transition to a point 4 NM southwest of the 25-NM fix from ATLIS. The protected airspace is from 11,999 MSL to 7,001 MSL. Complex aircraft can be at and below 7,000 MSL or at and above 12,000 MSL. (Ref. FAAH 7110.65, paragraph 9-4-2.)

Beginning at point H	35°06'20"N/118°08'03"W	
thence direct point I	35°03'50"N/118°10'00"W	
thence direct point J	34°50'00"N/118°10'50"W	
thence direct point K	34°51'00"N/118°14'03"W	Joint Use Letter of Procedure
thence direct point L	34°56'00"N/118°21'03"W	
thence direct point M	35°05'40"N/118°28'00"W	
thence direct point N	35°13'25"N/118°21'45"W	

thence direct point H (the point of beginning).

Red Rock Area: This is airspace from 4 NM southwest of the 25 NM fix from ATLIS to 4 NM southwest of the 10 NM fix from ATLIS. The protected airspace is from 11,999 MSL to 6,001 MSL. Complex aircraft can be at and below 6,000 MSL or at and above 12,000 MSL.

Beginning at point G	35°19'00"N/117°58'30"W
Thence direct point H	35°06'20"N/118°08'03"W
Thence direct point N	35°13'25"N/118°21'45"W
Thence direct point O	35°25'55"N/118°12'25"W

Thence direct point G (the point of beginning).

Bridge Area: This is airspace from 4 NM southwest of the 10NM fix from ATLIS to the Northeast boundary of the transition area. The protected airspace is from 11,999 MSL to surface. Complex aircraft can be at and above 12,000 MSL.

Beginning at point B	35°41'30"N/117°48'50"W	Ref. IYK Shelf
Thence a 3 NM arc from point A	35°38'30"N/117°48'30"W	Ref. IYK Shelf

to point C	35°37'30"N/117°45'00"W	Ref. IYK Shelf
Thence direct point D	35°33'45"N/117°47'20"W	Ref. IYK Shelf
Thence direct point E	35°28'00"N/117°47'03"W	Ref. FAAO 7400.8D
Thence direct point F	35°28'15"N/117°51'30"W	
Thence direct point G	35°19'00"N/117°58'30"W	
Thence direct point O	35°25'55"N/118°12'25"W	
Thence direct point P	35°40'20"N/118°01'20"W	

Thence direct point B (the point of beginning).

4.2 Owens MOA/ATCAA

4.2.1 Description and Operations

The Owens MOA covers 200 feet AGL to FL180 and the ATCAA covers FL180 to FL600. The Bishop MOA underlies the northeast corner of the airspace under the Owens ATCAA. Be aware of the difference in airspace size.

Owens is typically used for the following activities:

- OT&E/RDT&E, ACM, and training by units from NAS Lemoore, NAWS China Lake, Fresno ANG, and Edwards AFB
- Crossing of several MTRs (see Figure 4-2)
- Marshalling or holding points for large-scale strikes departing AR625 into R-2508

NOTE: Owens MOA/ATCAA has the highest density of military use within the Complex. Aircrews should use caution in crossing the Owens Valley east to west/west to east. Typical operations run north to south with multiple aircraft operating at varying altitudes.

4.2.2 Special Considerations

Aircraft use the China Lake local altimeter.

Altitude excludes 3,000 feet AGL floor over Kings Canyon National Park, Sequoia National Park, and John Muir Wilderness Area. Altitude also excludes 1,500 feet AGL within a 3 NM radius of the Lone Pine and Independence airports.

See Chapter 7, *R-2508 Complex Description and Use*, for more details concerning the following activities:

- Sailplane
- Ultralight
- Hang gliders
- General aviation VFR Transit routes (see Figure 7-3)

- Land Management helicopters and fixed-wing aircraft
- Sequoia and Kings Canyon National Parks, and John Muir Wilderness Area (see Figure 7-4)
- Populated areas: Lone Pine, Independence, Olancha, Keeler (see Figure 7-6)
- Charted airports
- Little Lake Hunting Club

NOTE: Avoid establishing holding patterns and/or conducting ACM activities over communities within the Owens Valley.

4.2.3 Dimensions

The dimensions of the **Owens MOA** are:

Beginning at 37°12’00”N/118°35’03”W;
thence direct 37°12’00”N/118°26’03”W;
37°02’00”N/118°20’03”W;
37°09’00”N/118°00’03”W;
36°46’00”N/118°00’03”W;
36°14’00”N/117°36’03”W;
thence along the northern and western boundary of R-2505 to
36°08’00”N/117°53’03”W;
thence direct 36°08’00”N/118°35’03”W;
thence direct to the point of beginning.

The dimensions of the **ATCAA** are:

Beginning at 37°12’00”N/118°35’03”W;
thence direct 37°12’00”N/118°00’03”W;
thence direct 36°46’00”N/118°00’03”W;
thence direct 36°14’00”N/117°36’03”W;
thence along the northern and western boundary of R-2505 to
36°08’00”N/117°53’03”W;
thence direct 36°08’00”N/118°35’03”W;
thence direct to the point of beginning.

4.3 Saline MOA/ATCAA

4.3.1 Description and Operations

The Saline MOA covers 200 feet AGL to FL180 and the ATCAA covers FL180 to FL600. Saline is typically used for the following activities:

- OT&E, RDT&E, ACM, and training by NAS Lemoore, NAWS China Lake, Fresno ANG, and Edwards AFB
- Low and high-altitude refueling activities (Saline Valley)
- Crossing of several MTRs (see Figure 4-2)
- Special platform aircraft orbits

4.3.2 Special Considerations

Aircraft use the China Lake local altimeter.

Altitudes do not include 3,000 feet AGL and below over Death Valley National Monument matching the line described below.

See Chapter 7, *R-2508 Complex Description and Use*, for more details about the following activities:

- Ultralight
- General aviation VFR Transit routes (see Figure 7-3)
- Land Management helicopters and fixed-wing aircraft
- Death Valley National Park (see Figure 7-5)
- Populated areas: Stove Pipe Wells, Furnace Creek (see Figure 7-6)
- Charted airports

CAUTION: **Pay specific and careful attention to the ridge crossing at Hunter Mountain that divides the Panamint and Saline MOAs. The "saddle" on the ridgeline is a narrow passage between the MOAs and is served by VR1205, which inherently possesses a high potential for a head-on collision.**

Use standard "rules-of-the-road" while approaching and passing through the saddle. Pilots should fly to the right side when passing through the saddle area. This helps prevent head-on collisions with aircraft passing in the opposite direction.

4.3.3 Dimensions

The dimensions of the **Saline MOA and ATCAA** are:

Beginning at 37°12’00”N/118°00’03”W;
thence direct 37°12’00”N/117°20’03”W;
thence direct 36°30’00”N/116°55’03”W;
thence direct 36°30’00”N/117°48’03”W;
thence direct 36°46’00”N/118°00’03”W;
thence direct to the point of beginning.

The line next to the Death Valley National Monument is:

Beginning at 37°01’19”N/117°13’39”W;
thence direct 37°01’19”N/117°13’50”W;
thence direct 37°05’01”N/117°18’54”W;
thence direct 37°05’05”N/117°33’47”W;
thence direct 36°58’57”N/117°33’47”W;
thence direct 36°58’56”N/117°34’05”W;
thence direct 36°53’55”N/117°34’11”W;
thence direct 36°53’51”N/117°35’16”W;
thence direct 36°51’10”N/117°35’16”W;
thence direct 36°51’08”N/117°36’20”W;
thence direct 36°47’58”N/117°36’18”W;
thence direct 36°47’51”N/117°37’07”W;
thence direct 36°40’21”N/117°37’08”W;
thence direct 36°40’21”N/117°36’03”W;
thence direct 36°37’45”N/117°36’05”W;
thence direct 36°37’45”N/117°31’44”W;
thence direct 36°36’52”N/117°31’44”W;
thence direct 36°36’56”N/117°30’53”W;
thence direct 36°36’38”N/117°30’26”W;
thence direct 36°36’31”N/117°29’54”W;
thence direct 36°35’54”N/117°29’43”W;
thence direct 36°35’27”N/117°28’59”W;
thence direct 36°35’29”N/117°28’41”W;
thence direct 36°34’21”N/117°28’32”W;
thence direct 36°33’29”N/117°28’45”W;
thence direct 36°32’39”N/117°30’16”W;
thence direct 36°31’56”N/117°30’08”W;
thence direct 36°31’29”N/117°28’20”W;
thence direct 36°30’16”N/117°25’34”W;
thence direct 36°30’00”N/117°25’35”W.

4.4 Panamint MOA/ATCAA

4.4.1 Description and Operations

The Panamint MOA covers 200 feet AGL to FL180, and the ATCAA covers FL180 to FL600. Panamint is typically used for the following activities:

- Support of R-2502N, R-2502E, and R-2524 operations by Nellis AFB, NAWS China Lake, Fresno ANG, and Edwards AFB
- OT&E, RDT&E, ACM, low-altitude training, and large-scale exercises
- Crossing of several MTRs (see Figure 4-2)
- Low and high-altitude refueling

4.4.2 Special Procedures

Aircraft use the China Lake local altimeter.

The MOA excludes 1,500 feet AGL and below within a 3 NM radius of the Trona airport and 3,000 feet AGL and below over Death Valley National Monument north and east of the line described below.

See Chapter 7, *R-2508 Complex Description and Use*, for more details about the following activities:

- Ultralight
- General aviation VFR Transit routes (see Figure 7-3)
- Land Management helicopters and fixed-wing aircraft
- Death Valley National Park (see Figure 7-5)
- Populated areas: Trona (see Figure 7-6)
- Charted airports
- Trona CFA/Trona Corridor
- Panamint Valley Mining (blasting)
- Severe Weather Area (4) (see subsection 3.2.1)

CAUTION! **Pay specific and careful attention to the ridge crossing at Hunter Mountain that divides the Panamint and Saline MOAs. The "saddle" on the ridgeline is a narrow passage between the MOAs and is served by VR1205, which inherently possesses a high potential for a head-on collision.**

Use standard "rules-of-the-road" while approaching and passing through the saddle. Pilots should fly to the right side when passing through the saddle area. This helps prevent head-on collisions with aircraft passing in the opposite direction.

4.4.3 Dimensions

The dimensions of the **Panamint MOA and ATCAA** are:

Beginning at 36°30'00"N/117°48'03"W;
thence direct 36°30'00"N/116°55'03"W;
thence direct 35°34'30"N/116°23'33"W;
thence along the northern boundary of R-2502N, the eastern, northern, and western boundaries of R-2524, and the northwestern boundary of R-2505 to 35°19'20"N/117°38'33"W;
thence direct 35°21'00"N/117°38'33"W;
thence direct 35°39'15"N/117°29'26"W;
thence along the eastern and northern boundary of R-2505 to 36°14'00"N/117°36'03"W;

thence direct to the point of beginning.

The line next to the Death Valley National Monument is:

Beginning at 36°30'00"N/117°25'35"W;
thence direct 36°29'46"N/117°25'36"W;
thence direct 36°27'14"N/117°22'01"W;
thence direct 36°25'41"N/117°22'01"W;
thence direct 36°25'34"N/117°20'58"W;
thence direct 36°26'16"N/117°19'11"W;
thence direct 36°25'00"N/117°18'36"W;
thence direct 36°25'10"N/117°17'57"W;
thence direct 36°24'15"N/117°17'23"W;
thence direct 36°23'48"N/117°15'36"W;
thence direct 36°13'57"N/117°15'33"W;
thence direct 36°13'55"N/117°09'09"W;
thence direct 36°08'44"N/117°09'04"W;
thence direct 36°08'40"N/117°09'04"W;
thence direct 36°06'58"N/117°03'47"W;
thence direct 36°05'54"N/117°04'33"W;
thence direct 36°05'28"N/117°03'54"W;
thence direct 36°01'42"N/117°02'34"W;
thence direct 35°58'53"N/117°04'31"W;
thence direct 35°58'37"N/117°05'17"W;
thence direct 35°57'13"N/117°06'45"W;
thence direct 35°55'23"N/117°06'35"W;
thence direct 35°54'11"N/117°05'24"W;
thence direct 35°53'10"N/117°01'39"W;
thence direct 35°52'54"N/116°55'21"W;
thence direct 35°47'44"N/116°55'22"W;
thence direct 35°47'44"N/116°36'05"W;
thence direct 35°39'03"N/116°36'01"W;
thence direct 35°39'03"N/116°26'06"W.

Chapter

5

5.0 Operating Procedures for Peripheral MOAs/ATCAAs

This chapter discusses the operating procedures for the following MOAs and ATCAAs:

5.1 Bakersfield (MOA and ATCAA)

5.2 Barstow (MOA and East & West ATCAAs)

5.3 Bishop (MOA)

5.4 Buckhorn (MOA and ATCAA)

5.5 Daggett Shelf

5.6 Deep Springs (ATCAA)

5.7 Porterville (MOA and ATCAA)

5.8 Shoshone (MOA and North & South ATCAAs)

This chapter first discusses general information relating to all peripheral MOAs and ATCAAs, then includes the following for each area, as needed:

- Scheduling
- Special Procedures
- Dimensions

5.1 Bakersfield (MOA and ATCAA)

The Bakersfield MOA covers 2,000 feet AGL to FL180, while the ATCAA covers FL180 to FL600 (see Figures 2-1 and 2-2). Bakersfield is outside of R-2508 but may be scheduled in conjunction with Isabella Work Area operations.

5.1.1 Scheduling

Bakersfield MOA/ATCAA must be scheduled in advance with CCF to ensure actions are pre-coordinated with Los Angeles or Oakland Air Route Traffic Control Center (ARTCC). **Scheduled events must additionally request the Bakersfield MOA/ATCAA real time with JOSHUA.**

Times of use for the MOA are Monday to Friday, 0600–2200. Other times by NOTAM.

5.1.2 Special Procedures

For both the MOA and ATCAA, use the Edwards AFB local altimeter.

5.1.3 Dimensions

Both the MOA and the ATCAA share the same dimensions:

Beginning at	35°40’00”N/118°51’03”W;
thence direct	35°40’00”N/118°35’03”W;
thence direct	35°15’00”N/118°51’03”W;
thence direct	34°56’00”N/118°21’03”W;
thence direct	35°14’00”N/118°42’03”W;

thence direct to the point of beginning.

5.2 Barstow (MOA and East & West ATCAAs)

The Barstow MOA covers 200 feet AGL to FL180. Both Barstow East and Barstow West ATCAAs cover FL180 to FL600 (see Figures 2-1 and 2-2). Barstow is used generally for the following purposes:

- Flight test operations at Edwards AFB
- Helicopter and fixed wing aircraft entering, exiting, or awaiting entry into R-2502N and R-2502E
- Military traffic on VR1217/VR1218 (see Figure 4-2)

5.2.1 Scheduling

Times of use are Monday to Friday, 0600–2200. Other times by NOTAM.

5.2.2 Special Procedures

For Barstow MOA and ATCAAs, use the Edwards AFB local altimeter.

Aircrews operating in Barstow or Shoshone must ensure that they request work areas Barstow East, Barstow West, Shoshone North, or Shoshone South ATCAA airspace in conjunction with the appropriate lower MOA airspace when needed.

The ATCAAs over the Barstow MOA have a different boundary than the airspace underneath (see Figures 2-1 and 2-2). Aircrews must be aware of these boundary differences to prevent spillouts into LA ARTCC airspace.

Aircrews requiring FL240 and above within Barstow East ATCAA must request those altitudes real time with JOSHUA, and can expect a maximum of 15-minute delay in receiving clearance.

5.2.3 Dimensions

For the **Barstow MOA**, the dimensions are:

Beginning at	35°07’00”N/116°34’03”W;
thence direct	35°40’00”N/116°41’03”W;
thence direct	35°15’00”N/117°09’03”W;

thence along the eastern border of R-2515 and the southern boundary of R-2502E to the point of beginning.

For the **Barstow East ATCAA**, the dimensions are:

Beginning at	35°07’00”N/116°47’48”W;
thence direct	35°07’00”N/116°34’03”W;
thence direct	35°01’20”N/116°41’03”W;
thence direct	34°58’30”N/116°57’48”W;

thence direct to the point of beginning.

For the **Barstow West ATCAA**, the dimensions are:

Beginning at	35°06’30”N/116°58’43”W;
thence direct	35°08’50”N/116°48’43”W;
thence direct	35°07’00”N/116°47’48”W;
thence direct	34°58’30”N/116°57’48”W;
thence direct	34°56’20”N/117°09’03”W;

thence direct to the point of beginning.

5.3 Bishop (MOA)

The Bishop MOA covers 200 feet AGL to FL180 (see Figure 2-1). Bishop MOA is located in the northeast corner of the Owens Work Area.

5.3.1 Scheduling

Bishop MOA must be scheduled in advance with CCF to ensure actions are pre-coordinated with LA or Oakland ARTCC. Aircrews must request use of the Bishop MOA real time with JOSHUA.

Times of use are Monday to Friday, 0600–2200. Other times by NOTAM.

5.3.2 Special Procedures

For the Bishop MOA, use the Bishop local altimeter when in use by Oakland ARTCC. Use the China Lake local altimeter when in use by TRACON/LA ARTCC.

5.3.3 Dimensions

The dimensions of the **MOA** are:

Beginning at	37°12’00”N/118°26’03”W;
thence direct	37°12’00”N/118°00’03”W;
thence direct	37°09’00”N/118°00’03”W;
thence direct	37°02’00”N/118°20’03”W;

thence direct to the point of beginning.

5.4 Buckhorn (MOA and ATCAA)

The Buckhorn MOA covers 200 feet AGL to FL180, while the ATCAA covers FL180 to FL600 (see Figure 2-1 and 2-2). Buckhorn is used extensively for test missions at Edwards AFB.

5.4.1 Scheduling

Times of use are Monday to Friday, 0600–2200. Other times by NOTAM.

5.4.2 Special Procedures

For both the MOA and the ACTAA, aircraft use the Edwards AFB local altimeter.

5.4.3 Dimensions

The dimensions of both the MOA and the ATCAA are:

Beginning at 34°49’40”N/118°05’48”W;

thence along the southern boundary of R-2515 to 34°51’17”N/117°26’03”W;

thence direct 34°49’30”N/117°26’03”W;
thence direct 34°46’30”N/117°35’03”W;
thence direct 34°46’00”N/118°00’03”W;
thence direct 34°48’00”N/118°05’48”W;

thence direct to the point of beginning.

5.5 Daggett Shelf

The Daggett Shelf consists of Barstow East ATCAA, R-2502E, and the portion of R-2508 that coincides with R-2502E, FL240 and above (see highlighted portion of Figure 7-1). It was established by a Letter of Agreement (LOA) to provide FAA relief for control of IFR traffic through the Daggett/Hector Corridor.

5.5.1 Command and Control

The Daggett Shelf, along with Shoshone South ATCAA airspace, remains under LA ARTCC control until JOSHUA requests and receives control.

5.5.2 Scheduling

Aircrews requiring one or more of these areas that comprise the Daggett Shelf or Shoshone South ATCAA, FL240 or above, shall request the area(s) and altitudes from JOSHUA and should expect up to a 15 minute delay for the transfer of airspace control from LA ARTCC to JOSHUA.

5.5.3 Special Procedures

DO NOT enter any portion of the Daggett Shelf or Shoshone South until JOSHUA issues specific clearance.

5.6 Deep Springs (ATCAA)

The Deep Springs ATCAA covers FL240 to FL600 (see Figure 2-2). It borders the northern border of the Saline ATCAA.

5.6.1 Scheduling

Deep Springs ATCAA must be scheduled in advance with CCF to ensure activities are pre-coordinated with LA and Oakland ARTCC.

5.6.2 Special Procedures

Aircraft use the China Lake local altimeter.

Scheduled events must additionally request the Deep Springs ATCAA real time with JOSHUA.

5.6.3 Dimensions

The dimensions of the **ATCAA** are:

Beginning at	37°12’00”N/118°00’03”W;
thence direct	37°30’00”N/118°00’03”W;
thence direct	37°30’00”N/117°30’03”W;
thence direct	37°12’00”N/117°20’03”W;

thence direct to the point of beginning.

5.7 Porterville (MOA and ATCAA)

The Porterville MOA covers 2,000 feet AGL to FL180, and the ATCAA covers FL180 to FL600 (see Figures 2-1 and 2-2).

5.7.1 Scheduling

Porterville MOA/ATCAA must be scheduled in advance with CCF to ensure activities are pre-coordinated with LA or Oakland ARTCC.

Times of use are Monday to Friday, 0600–2200. Other times by NOTAM.

5.7.2 Special Procedures

Aircraft based at NAS Lemoore use the Fresno local altimeter. All other aircraft use the China Lake local altimeter.

Scheduled events must additionally request the Porterville MOA/ATCAA real time with JOSHUA.

5.7.3 Dimensions

The dimensions of both the MOA and the ATCAA are:

Beginning at	36°08’00”N/119°00’03”W;
thence direct	36°08’00”N/118°35’03”W;
thence direct	35°40’00”N/118°35’03”W;
thence direct	35°40’00”N/118°51’03”W;

Thence direct to the point of beginning.

5.8 Shoshone (MOA & North/South ATCAAs)

The Shoshone MOA covers 200 feet AGL to FL180. The North and South ATCAAs cover FL180 to FL600 (see Figures 2-1 and 2-2). Shoshone MOA/ATCAA airspace is used for the following types of operations:

- OT&E, ACM, low-altitude training, and large-scale exercises (usually in conjunction with Panamint)
- Low-altitude tanking operations in support of large-scale exercises
- Crossing of several MTRs (see Figure 4-2)

5.8.1 Scheduling

Schedule through CCF. Times of use are Monday to Friday, 0600–2200. Other times by NOTAM.

5.8.2 Special Procedures

Aircraft use the China Lake local altimeter.

Aircrews must request use of the Shoshone MOA and ATCAAs real time with JOSHUA.

Aircrews operating in Barstow or Shoshone must ensure that they request work areas Barstow East, Barstow West, Shoshone North, or Shoshone South ATCAA airspace in conjunction with the appropriate lower MOA airspace when needed.

The ATCAAs over the Shoshone MOA have different boundaries than the airspace underneath (see Figures 2-1 and 2-2). Aircrews must be aware of these boundary differences to prevent spillouts into LA ARTCC airspace.

Also, altitudes are restricted below 1,500 feet AGL within a 3 NM radius of the Shoshone airport and below 3,000 feet AGL over Death Valley National Monument north and west of the line indicated below.

Shoshone South ATCAA is considered an extension of the Daggett Shelf and cannot be scheduled above FL230. **Aircrews requiring FL240 and above within Shoshone South ATCAA must request those altitudes real time with JOSHUA. Aircrews should expect a maximum of 15-minute delay in receiving clearance to operate above FL240.**

5.8.3 Dimensions

The dimensions of the **MOA** are:

Beginning at	36°30'00"N/116°55'03"W;
thence direct	36°30'00"N/116°47'03"W;
thence direct	36°06'00"N/116°18'03"W;
thence direct	35°39'00"N/115°53'03"W;
thence direct	35°18'45"N/116°18'48"W;
thence direct	35°28'35"N/116°18'48"W;
thence direct	35°34'30"N/116°23'33"W;

thence direct to the point of beginning.

The dimensions along the Death Valley National Monument are as follows:

Beginning at	35°39'03"N/116°26'06"W;
thence direct	35°39'03"N/116°21'48"W;
thence direct	35°48'14"N/116°21'49"W;
thence direct	35°48'11"N/116°29'41"W;
thence direct	35°52'17"N/116°29'43"W;
thence direct	35°58'22"N/116°29'22"W;
thence direct	35°58'23"N/116°35'47"W;
thence direct	36°10'08"N/116°35'47"W;
thence direct	36°10'11"N/116°38'58"W;
thence direct	36°17'57"N/116°39'01"W;
thence direct	36°17'58"N/116°40'33"W;
thence direct	36°18'30"N/116°41'05"W;
thence direct	36°24'54"N/116°41'04"W;
thence direct	36°24'54"N/116°40'51"W.

The dimensions of the **Shoshone North ATCAA** are:

Beginning at	36°30’00”N/116°55’03”W;
thence direct	36°30’00”N/116°47’03”W;
thence direct	36°06’00”N/116°18’03”W;
thence direct	35°44’15”N/115°57’48”W;
thence direct	35°28’35”N/116°18’48”W;
thence direct	35°34’30”N/116°23’33”W;

thence direct to the point of beginning.

The dimensions of the **Shoshone South ATCAA** are:

Beginning at	35°44’15”N/115°57’48”W;
thence direct	35°39’00”N/115°53’03”W;
thence direct	35°18’45”N/116°18’48”W;
thence direct	35°28’35”N/116°18’48”W;

thence direct to the point of beginning.

Chapter

6

6.0 Operating Procedures for Individual Ranges/ Restricted Areas

This chapter discusses the operating procedures for the following restricted areas:

6.1 R-2502N, R-2502E, National Training Center, Fort Irwin

6.2 R-2505, Naval Air Warfare Center, Weapons Division, China Lake

6.3 R-2506, Naval Air Warfare Center, Weapons Division, China Lake

6.4 R-2524, Naval Air Warfare Center, Weapons Division, China Lake

6.5 R-2524, Superior Valley Tactical Training Range, Naval Air Warfare Center, Weapons Division, China Lake

6.6 R-2515, Air Force Flight Test Center, Edwards AFB

6.1 R-2502N, R-2502E, National Training Center, Fort Irwin

R-2502N/R-2502E consists of five separate areas and purposes (see Figure 6-1):

Area	Purpose
1. Southern Engagement Corridor	Force-on-Force battle simulation area
2. Central Engagement Corridor	Force-on-Force battle simulation area
3. Live Fire Exercise Corridor	Area contains computerized, pop-up, direct-fire artillery, and close-air-support (CAS) targets. During a live-fire exercise, actual battle conditions are closely simulated with artillery fire, tanks, and troops advancing against computerized arrays supported by attack helicopters and with jet aircraft CAS targets.
4. Leach Lake Air Gunnery Range (north portion of R-2502N) Beginning at 35°37'45"N/116°55'23"W, thence direct 35°37'45"N/116°29'43"W, thence direct 35°32'53"N/116°29'43"W, thence direct 35°32'53"N/116°55'23"W.	Maneuvering by Army, Air Force, and Navy flying units providing CAS during rotational periods. During non-rotational periods, overflight of Leach Lake must be scheduled as outlined in subsection 6.1.2.
5. Goldstone Deep Space Tracking Facility (western boundary of R-2502N)	**Intense electromagnetic and other radiation hazards. Avoid overflight below 15,000 feet MSL. Overflight above 15,000 feet MSL must be coordinated with CCF.** When Goldstone is making high-power transmissions or is involved in a critical/sensitive event, the area of avoidance is increased. During these times, information can be obtained from CCF. Real-time coordination can be accomplished by contacting JOSHUA, ASC, or SUNDANCE on UHF radio. Broadband jamming and aeronautical telemetry in the 2200–2290 MHz band are not allowed within line of sight of Goldstone without prior scheduling through the Western Area Frequency Coordinator, Point Mugu. Radio frequency emissions in the 2290–2300 MHz and 8400-8450 MHz bands are not allowed within line of sight of Goldstone.

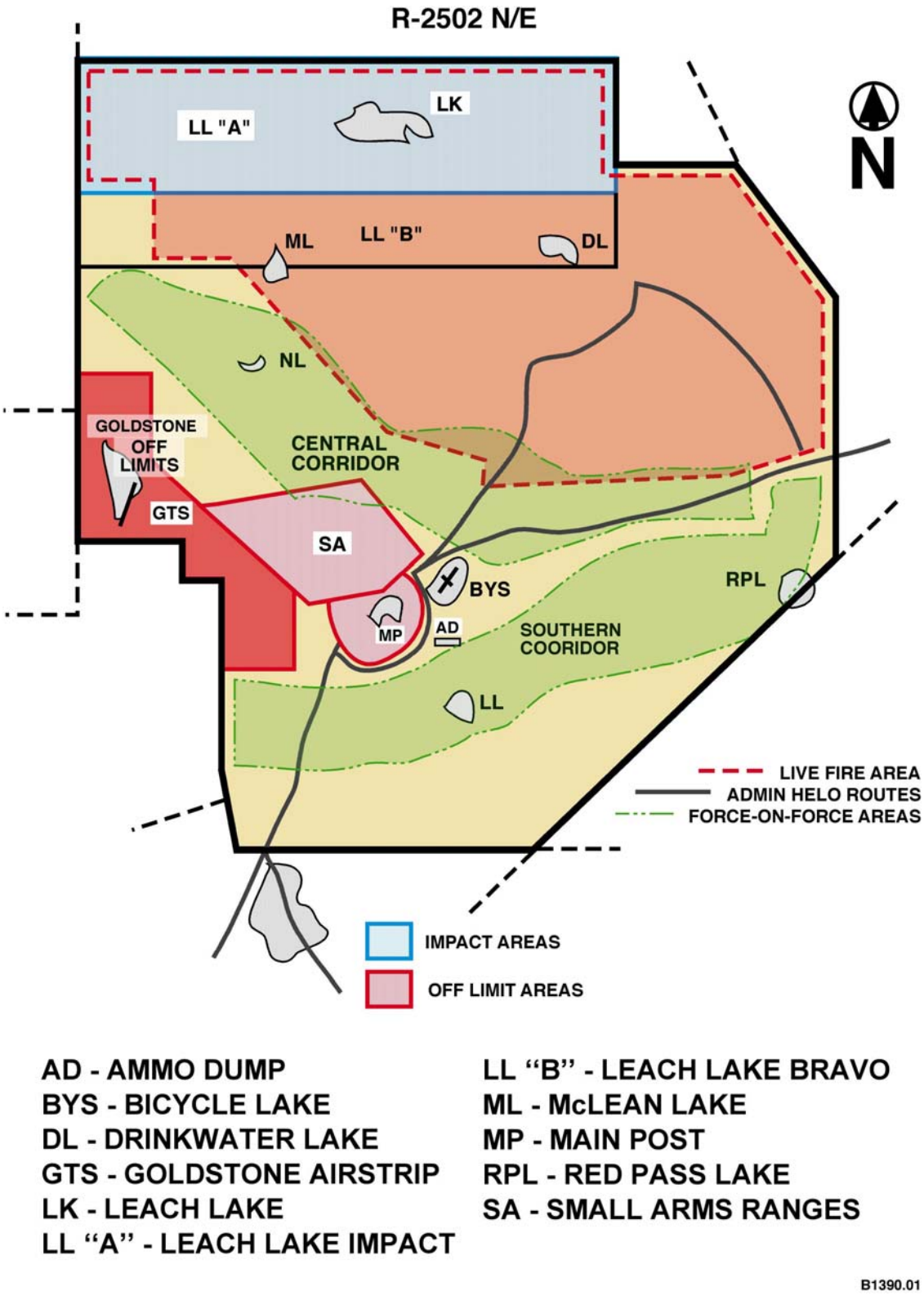

Figure 6-1. *R-2502 Complex.*

6.1.1 Command and Control

Aircraft must be in contact with and under the control of one of the following agencies:

Army Flight Following Service (AFFS) Fort Irwin "DESERT RADIO"	• AFFS is the primary control for R-2502N and R-2502E. AFFS is operational 24 hours/7 days. • Frequencies: UHF 281.45; VHF 118.75; FM 41.50 • Initial contact with DESERT RADIO is required prior to entering R-2502N or R-2502E.
NTC Airspace Control Center (NACC) Fort Irwin (NACC/SUNDANCE)	• NACC/SUNDANCE is a multi-function Air Force element that serves as a focal point for close-air support activities. Functions include airspace procedural control and direct airspace coordination/deconfliction with Operations Group and AFFS. • Manned 1 hour prior to the first take off time from Nellis AFB until 30 minutes past the last flight's departure from R-2502N/E, or as required. • If a flight is approved and SUNDANCE is not operating, contact DESERT RADIO.

6.1.2 Scheduling

Requests for use of ranges and training areas will be submitted to Range Scheduling no later than 15 working days prior to the desired use date.

- All aircraft operations within R-2502N/E require coordination with Bicycle Lake Army Field.
- Contact CCF to schedule the MOAs for entry and exit.

Prior Permission Required (PPR) should be obtained from Bicycle Lake Army Air Field (AAF) 72 hours before operations to allow for required coordination.

Function	Hours of Operation	Contact Numbers
Scheduling (Bicycle Lake AAF)	24 hours/7 days a week	DSN 470-4320 / 6816 (760) 380-4320 / 6816 Fax: DSN 470-6368 (760) 380-5500
Installation Aviation Officer	0800–1600 M-F	DSN 470-4072 / 4167 (760) 380-4072 / 4167 Fax: DSN 470-6368 (760) 380-6368

6.1.3 Special Procedures

Air Warrior aircrews deploying in support of NTC Fort Irwin exercises will receive a local orientation briefing before conducting NTC Fort Irwin operations. The briefing will be conducted by the 549 CTS at Nellis AFB (DSN 682-4262/4060/5561).

Familiarization rides in R-2502N/E will be flown in Southern/Central/Live-Fire Corridors before CAS missions are flown. All helicopter aircrews will be briefed by the NTC Installation Aviation Safety Officer (IASO) prior to flight in R2502N and R2502E.

Coordination Altitudes

- **Fixed-wing aircraft:** remain above 300 feet AGL unless they receive specific authorization from DESERT RADIO or SUNDANCE/NACC.
- **Helicopters:** remain below 200 feet AGL unless coordinated and approved by DESERT RADIO or SUNDANCE/NACC.

Additional restrictions as follows:

- Overflight of NTC Fort Irwin cantonment and Ammo Supply Point (NU 290 980) is prohibited.
- Overflight of Bicycle Lake AAF with ordnance is prohibited.
- Overflight of Bicycle Lake AAF by fixed-wing aircraft is restricted to above 5,500 feet MSL unless coordinated and approved by AFFS. Air Warrior aircraft may request approval through SUNDANCE.
- Overflight of Goldstone area must be coordinated with CCF.
- Scheduled fixed wing operations in Leach Lake allow aircraft operations down to the surface, **unless otherwise coordinated by AFFS**.

Helicopter Operations

Coordinate all helicopter entries by PPR. Schedulers will receive a briefing at that time on entry procedures. Coordinate and schedule the local area briefing at Bicycle Lake in advance. All helicopters will land at Bicycle Lake AAF for a local area briefing before further flight on the reservation.

Helicopters will monitor at least one AFFS radio frequency at all times and will be provided with current range and fixed-wing traffic information as well as flight following service.

6.2 R-2505, Naval Air Warfare Center, Weapons Division, China Lake

Restricted Area R-2505 is restricted from surface to unlimited on a continuous basis and is subdivided into five primary ranges (see Figure 6-2). The primary mission of these ranges is the Research, Development, Test, and Evaluation (RDT&E) of weapons and weapons systems.

Located within R-2505 are six bombing ranges, one guided-missile range, and numerous ground ranges and arenas. The six bombing ranges contain instrument targets for air-to-surface, air-to-air, and surface-to-air firings. Remotely piloted aircraft with No Live Operator On-board (NOLOs) are sometimes used as targets.

The target complex in the Coso and Baker Ranges contains targets for air-to-surface bombing and strafing by fleet and development activities. A rocket engine test complex and explosives test complex for experimental rocket engines and warheads occupies the southeast corner of the George Range complex. A test parachute drop area is also located in George Range.

Armitage Airfield is located within the southern part of the R-2505 ranges and requires specific entry and departure procedures (see FLIP-AP1) to avoid restricted range activities.

6.2.1 Command and Control

The separate ranges within R-2505 each have a designated mission frequency. Depending on the type of mission, range controllers will either monitor the mission or provide precision vectors and range asset coordination.

All aircraft using R-2505 and R-2524 ranges will check in with the Airspace Surveillance Center (ASC), call sign "CHINA CONTROL," on the appropriate frequency.

CHINA CONTROL will:

- Issue all pertinent information
- Advise the aircraft to check in with the appropriate test conductor
- Continue to monitor mission frequency
- Provide radar advisory service.

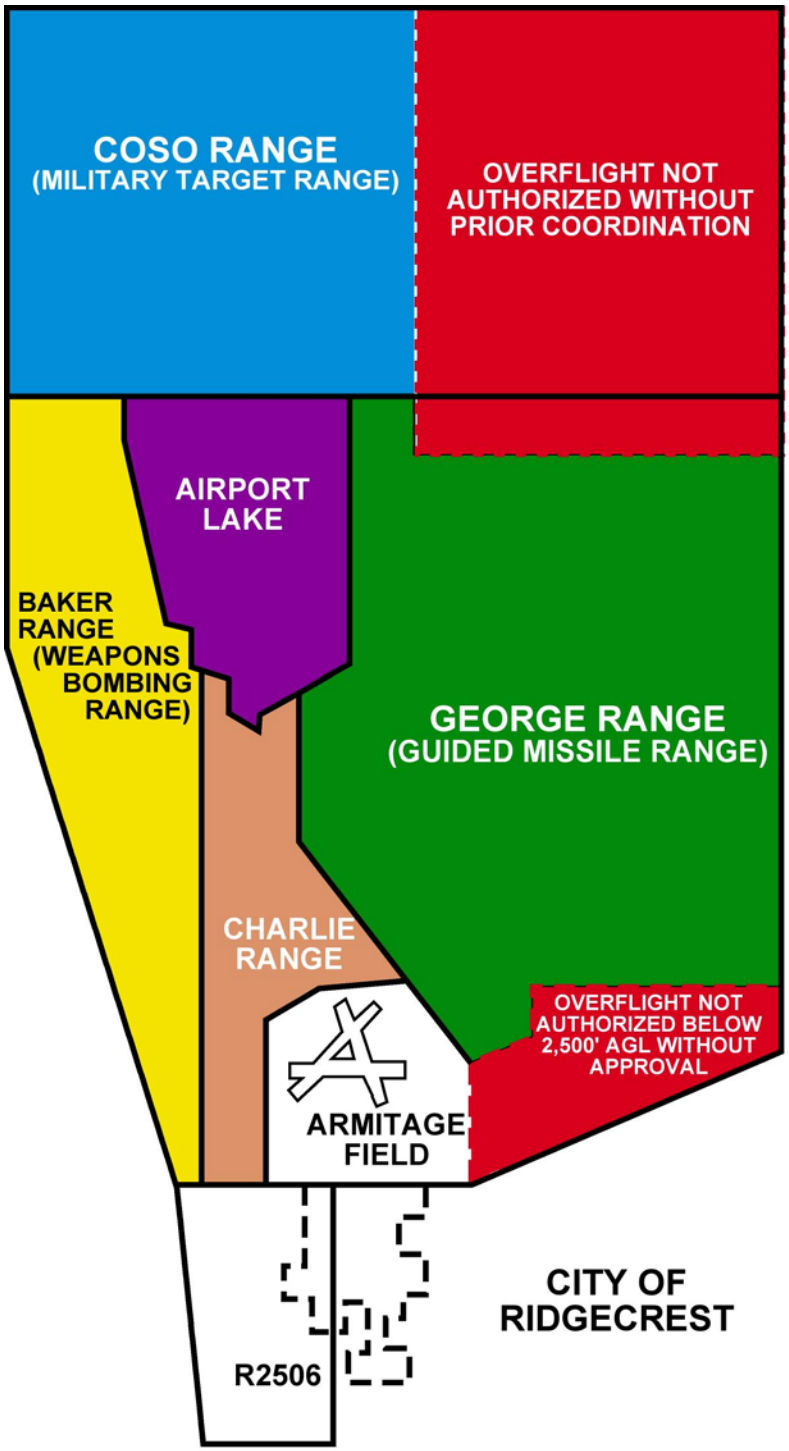

Figure 6-2. *R-2505 Ranges.*

6.2.2 Scheduling

Request use of R-2505 through the Test Management Office or by message in accordance with NAWCWPNSINST 3710.5.

Schedule required R-2508 Complex work areas (to access R-2505) with the CCF.

A Test Manager will be assigned to coordinate approval for the requested use. Test Manager support will include the following, as appropriate:

- Developing and approving a test plan
- Providing guidance about reimbursement costs for China Lake support
- Scheduling appropriate China Lake airspace and range assets
- Scheduling airspace, range, and course rules briefings, as required

If requesting airspace use only over R-2505, contact the Range Scheduling Office. All aircrews scheduled to operate in R-2505 must be briefed before operating in R-2505.

Function	Hours of Operation	Contact Numbers
Scheduling	0700–1700 M-Th 0700–1600 F (non-civilian payday)	DSN 437-6800 (760) 939-6800 Fax: DSN 437-6950 (760) 939-6950
Test Management Office	0700–1700 M-Th 0700–1600 F (non-civilian payday)	DSN 437-6807 (760) 939-6807 Fax: DSN 437-6950 (760) 939-6950
Airspace Surveillance Center (ASC) “China Control”	0700–1700 M-Th 0700–1600 F (non-civilian payday)	DSN 437-6808/9 (760) 939-6808/9 Fax: DSN 437-6927 (760) 939-6927

6.2.3 Special Procedures

PPRs are necessary to land at Armitage Field. To obtain a PPR and to arrange for transient support services, contact the NAWS China Lake Fleet Liaison Office (DSN 437-5523/5464).

6.3 R-2506, Naval Air Warfare Center, Weapons Division, China Lake

R-2506 is restricted from the surface to 6,000 feet MSL (1,400–3,700 feet AGL from the highest and lowest obstructions, respectively) from sunrise to sunset, Monday through Friday (see Figure 6-2).

The primary mission is to provide airspace to maneuver for high-speed, low-altitude run-in flights to targets located within R-2505. This area is also used to route noise-abatement departures from Armitage Field on a non-interference basis.

6.3.1 Command and Control

Radar advisory service for R-2505 range activities utilizing R-2506 is provided by the China Lake ASC (CHINA CONTROL, 301.0 MHz).

6.3.2 Scheduling

R-2506 is scheduled using the same procedures as for R-2505.

6.3.3 Special Procedures

For real-time transit of R-2506, contact CHINA CONTROL on 301.0/128.25 MHz.

If unable to contact CHINA CONTROL, contact CHINA LAKE TOWER on 340.2/120.15 MHz.

6.4 R-2524, Naval Air Warfare Center, Weapons Division, China Lake

R-2524 is restricted from surface to unlimited on a continuous basis and encompasses the Superior Valley and the Mojave B North target area (see Figure 6-3).

The Electronic Combat Range (ECR), with its complexes known as **ECHO Range**, is located throughout R-2524 and provides a simulated hostile land and sea surface-to-air weapons installation. The instrumented range supports RDT&E, Radar Warning Receiver (RWR) systems, Anti-Radiation Missile (ARM) systems, and electronic warfare training. Most ECHO missions require full use of R-2524.

Mojave B North target area (located in the northern part of R-2524) contains two convoy targets and a simulated airfield with aircraft targets that are for use with inert ordnance only.

6.4.1 Command and Control

ECHO Range provides a test team for control of test/mission aircraft and control of ground-based threat simulation in accordance with test parameters.

All aircraft using R-2524 ranges will check in with the Airspace Surveillance Center (ASC), call sign "CHINA CONTROL," on the appropriate frequency. CHINA CONTROL will:

- Issue all pertinent information
- Advise the aircraft to check in with the appropriate test conductor
- Continue to monitor mission frequency
- Provide radar advisory service

Additional control for Mojave B North consists of a ground or airborne safety observer.

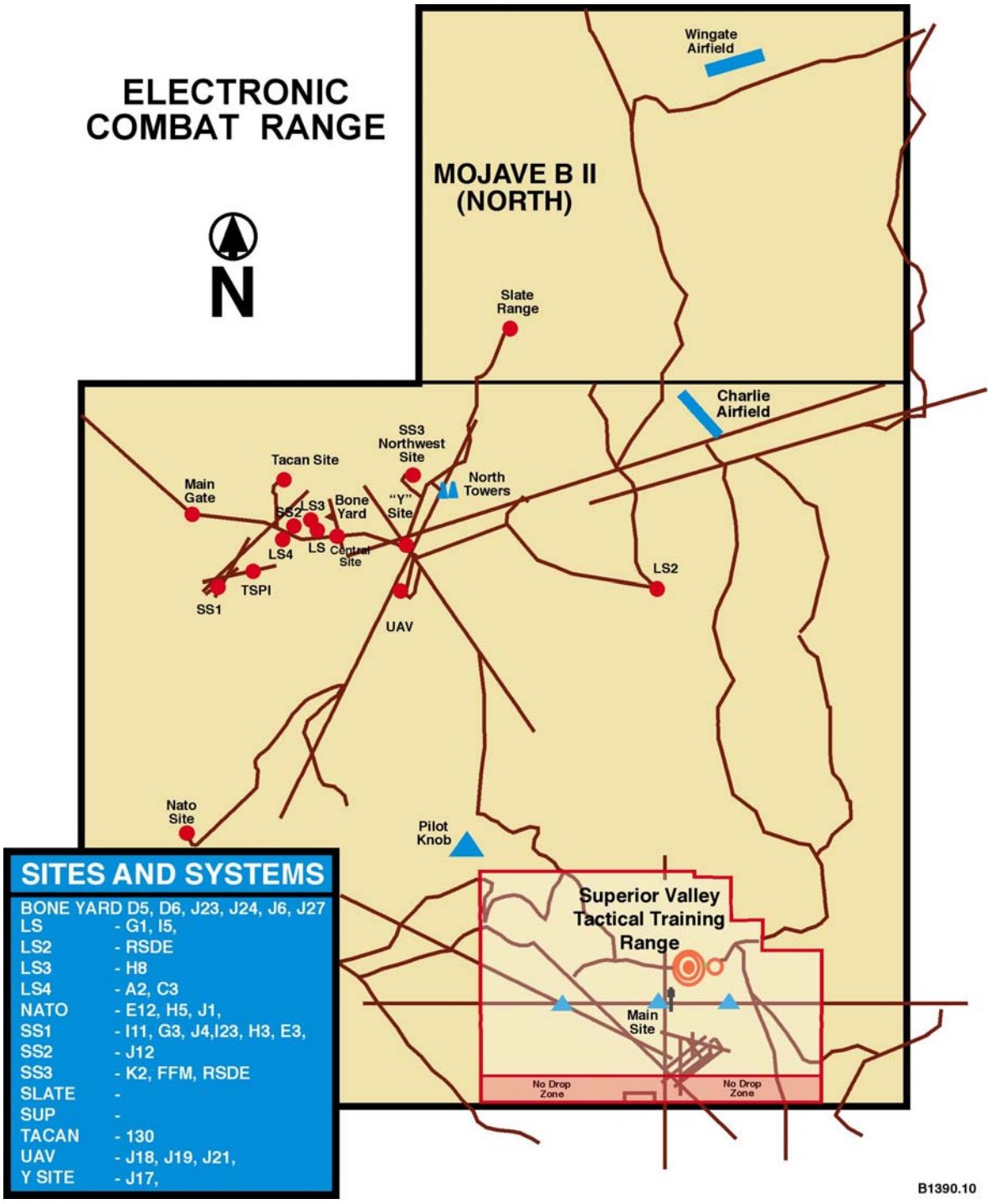

Figure 6-3. *R-2524 ECR and Superior Valley Ranges.*

6.4.2 Scheduling

Requests for use of ECHO range will be made by contacting the ECR Test Management Branch or by message in accordance with NAWCWPNSINST 3710.5. Request for use of R-2524 (airspace only) should be forwarded directly to the ECR Scheduling Office.

Real-time requests for overflight may be made through JOSHUA or CHINA CONTROL.

Function	Hours of Operation	Contact Numbers
ECR Scheduling	0630–1630 M-Th	DSN 437-9128 (619) 939-9128 Fax: DSN 437-9152 (619) 939-9152
Test Management Office	0630–1630 M-Th	DSN 437-9149 (619) 939-9149

In all cases, except requests for airspace only, a Test Manager will be assigned to coordinate and obtain approval, as appropriate. The Test Manager will aid in developing a test plan, providing range cost information, and coordinating scheduling of airspace and range assets.

NOTE: Transit to and from R-2524 and Armitage Field requires scheduling and a Work Area Clearance.

6.4.3 Special Considerations

R-2524 is bordered on the south and east by other restricted areas and on the west and north by Panamint MOA/ATCAA. Normal transit to and from R-2524 through adjacent Complex airspace requires appropriate scheduling and approval in accordance with procedures outlined in Chapters 4, 5, and 6, depending on the area.

Aircrews must schedule the surrounding R-2508 Complex work areas with CCF.

6.5 R-2524, Superior Valley Tactical Training Range, Naval Air Warfare Center, Weapons Division, China Lake

The Superior Valley Tactical Training Range (see Figure 6-3) is located within R-2524, about 41 miles southeast of the main Naval Air Weapons Station (NAWS) complex. The range is operated by the NAWCWPNS and has approximately 76 square miles of secluded land and airspace. The area is restricted from surface to unlimited on a continuous basis.

Superior Valley coordinates are:

Beginning at 35°15'56"N/117°12'27"W;
thence direct 35°25'00"N/117°12'27"W;
thence direct 35°25'00"N/116°55'23"W;
thence direct 35°15'56"N/116°55'23"W;
thence direct to the point of beginning.

The Superior Valley Tactical Training Range has over 60 diverse targets, including surface-to-air missiles (SAMs), anti-aircraft artillery (AAA), and convoy targets. All targets are available for inert ordnance delivery only.

The Range consists of a Range Operations Center, a main control tower, two flank towers, a photovoltaic power production facility, a helicopter pad, a target storage facility, and four main targeting areas:

- Northwest Target Complex
- Conventional and Alternate Bombing Circles
- Southeast Airfield Target Complex
- Low and High-Angle Strafe Pit

6.5.1 Command and Control

The Range Control Officer (RCO) controls range entry and departures, supervises air operations, monitors safety, and allocates the use of the target complexes within the range.

NOTE: CHINA CONTROL may use altitude restrictions to deconflict other scheduled flights in R-2524.

6.5.2 Scheduling

The Superior Valley Range Manager will schedule all daily activity at the Superior Valley Range. The normal working hours of the ECR are M-F, 0630 (LCL)–1630 (LCL).

Range scheduling for U.S. Navy Fleet users will be provided to the ECR Test Operations Branch **10 days** before the week requested by SFWSP, NAS Lemoore, CA. NAS Lemoore squadrons will have priority up to the 10-day deadline. Remaining range periods will be made available to other agencies after the 10-day deadline.

Cancellation should be made no later than 48 hours before the flight. Scheduling of Superior Valley does not include the remaining R-2524 airspace. Requests for use of R-2524 airspace will be coordinated on a not-to-interfere basis.

Request for use of R-2524 assets in conjunction with Superior Valley must be coordinated with an ECR Test Manager.

6.5.3 Special Considerations

Superior Valley is bordered on the north and west by R-2524, on the east by R-2502N and on the south by R-2515.

Normal transit to Superior Valley through R-2524 is through either the Cuddeback North/South corridors or the Echo Bypass (see Figure 6-4).

Transit through adjacent Complex airspace and restricted areas requires appropriate scheduling and approval in accordance with procedures outlined in Chapters 4, 5, and 6.

NOTE: Aircrews must coordinate non-standard ingress/egress routes when scheduling the ranges.

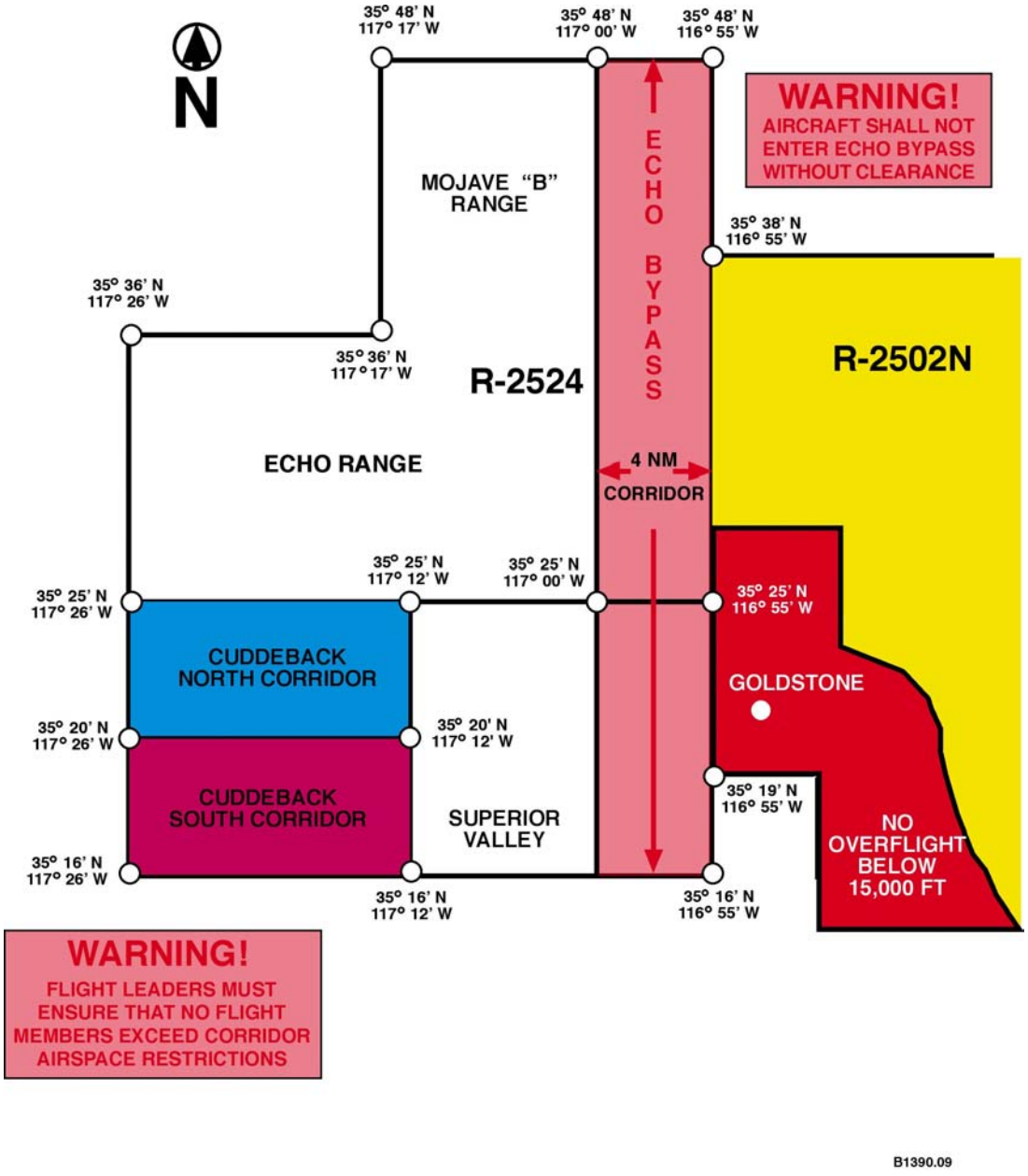

Figure 6-4. *R-2524 Bypasses.*

6.6 R-2515, Air Force Flight Test Center, Edwards AFB

R-2515 is restricted from the surface to unlimited on a continuous basis (see Figure 6-5). The area encompasses Edwards AFB and extends north and east to the borders of R-2524 and R-2502N. It also includes the "Golden Triangle."

The Golden Triangle (see Figure 6-5) is a portion of R-2515 that extends north of the westerly extension of the southern boundary of R-2524. Units requiring this area for transition in and out of R-2524 will schedule the requirement with CCF.

Coordinates for the Golden Triangle are:

Beginning at 35°27'40"N/117°26'03"W
thence direct 35°15'56"N/117°26'03"W
thence direct 35°15'56"N/117°43'41"W
thence to the point of beginning.

R-2515 contains various instrument ranges and special-use areas (spin areas, supersonic corridors, drop zones, etc.). The area is used for a variety of flight test operations that require a high degree of eyes-in-the-cockpit flying. ROAs are also flown in the area.

Each aircrew is responsible for remaining clear of special-use areas. This requires detailed knowledge of the area and is the basis for outside users being briefed and scheduled.

Detailed descriptions of the various special-use areas are provided in AFFTC Instruction 11-1. Users can obtain a copy from the R-2515 Airspace Manager.

Special use areas within R-2515 may be scheduled for use by non-AFFTC aircraft. An airspace briefing from the Airspace Manager is required. Availability is based upon higher priority AFFTC missions. Some reimbursable costs may be imposed.

6.6.1 Command and Control

SPORT (272.0/132.75 MHz) provides boundary calls, radar traffic, and safety advisories to all participating aircraft within R-2515. Pre-mission briefing is required with SPORT (DSN 527-3928/3931) prior to flying test missions or using special-use areas within R-2515. Mission details must be thoroughly coordinated to ensure adequate briefings are obtained concerning airspace use and scheduled mission profiles.

Repeated use of R-2515 airspace to conduct flight operations or transit requires a LOA with AFFTC. Limited periods of use may be permitted without formal written agreement when deemed appropriate by AFFTC. The R-2515 Airspace Manager is the initial coordination POC.

All non-AFFTC sponsored aircraft, military or civilian, that have a requirement to operate from Edwards AFB on any type of support mission—regardless of agency or project being supported—must contact the 412TW/RMX by message or phone (DSN 525-9245 or 661-275-9245) at least **20 days before** the mission for approval and assignment of a sponsor or project officer.

6.6.2 Scheduling

Scheduling information is as follows:

Function	Hours of Operation	Contact Numbers
AFFTC Resource Operations Center	0600–1700 M-F	DSN 527-3940 / 4110 (661) 277-3940 / 4110 Fax: DSN 527-9785 (661) 277-9785
Airspace Management Office	0600–1730 M-F	DSN 527-2446 / 4453 (661) 277-2446 / 4453 Fax: DSN 527-4462/5544 (661) 277-4462/5544

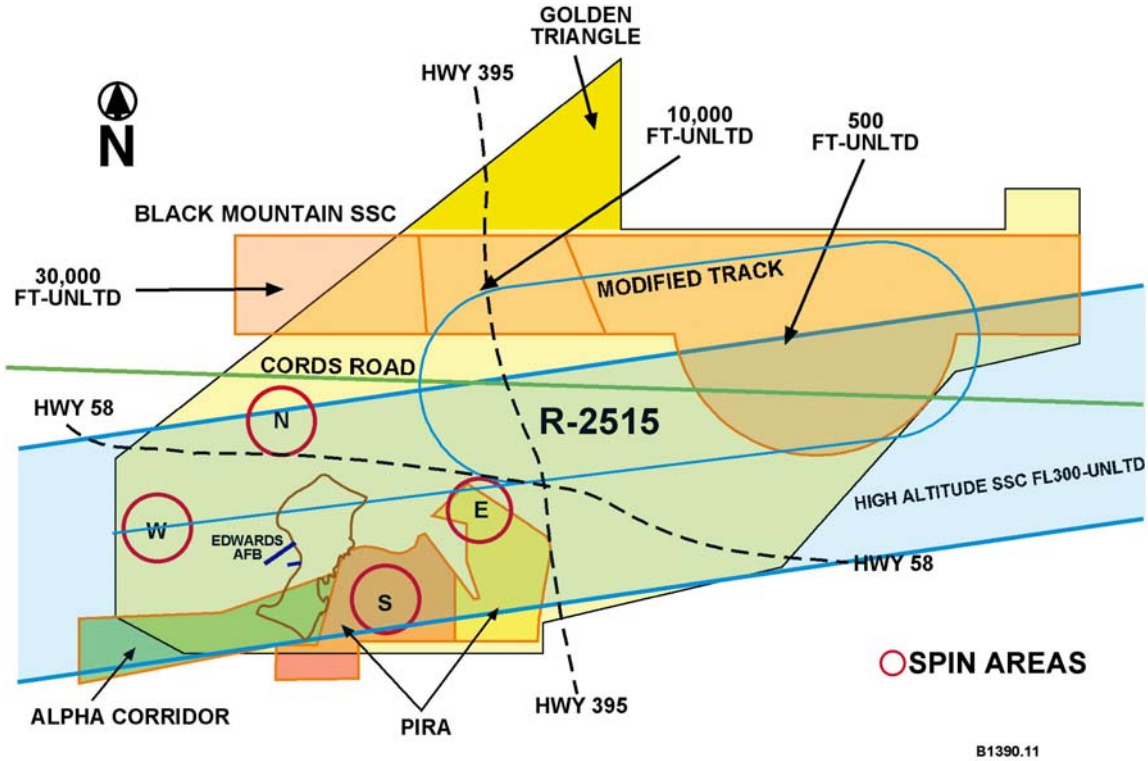

Figure 6-5. *R-2515.*

6.6.3 Special Procedures

Participating aircraft are VFR crossing the R-2515 boundary.

A PPR is required for landing at Edwards AFB. To obtain a PPR and airspace briefing, contact Edwards AFB Base Operations (DSN 527-2222 or 661-277-2222). Consult FLIP AP1 for further restrictions and information for landing at Edwards AFB. Also, an R-2508 Complex briefing may be obtained from the CCF (DSN 527-2508 or 661-277-2508).

Chapter

7

7.0 R-2508 Complex Description and Use

This chapter provides general overview information for the R-2508 Complex, including:

- A description of the R-2508 Complex airspace
- A list of typical activities that occur within the Complex
- Descriptions of non-military activity within the Complex
- Descriptions of sensitive areas within the Complex
- Cautions in using the Complex

7.1 R-2508 Complex Airspace Description

The R-2508 Complex includes all the airspace and associated land presently used and managed by the three principal military activities in the Upper Mojave Desert region:

- Air Force Flight Test Center (AFFTC), Edwards Air Force Base (AFB)
- National Training Center (NTC), Fort Irwin
- Naval Air Warfare Center Weapons Division (NAWCWPNS), China Lake

The R-2508 Complex is composed of internal restricted areas, Military Operations Areas (MOAs), Air Traffic Control Assigned Airspace (ATCAAs) areas, and other special airspace (see Figure 7-1).

7.1.1 Internal Restricted Areas

Restricted area R-2508 extends from FL200 upward to unlimited and is shared-use airspace. Individual restricted areas within R-2508 include R-2502N, R-2502E, R-2505, R-2506, R-2515, and R-2524. These internal restricted areas have vertical dimensions of surface to unlimited, except for R-2506, which extends from surface to 6,000 feet MSL.

Entry to these areas requires prior approval from the designated using agency.

The internal restricted areas are "owned" by individual military agencies, which may release those areas—in their entirety or in part—by establishing an overflight altitude for FAA/DoD joint use. The released airspace becomes part of the basic R-2508 Complex.

Figure 7-1. *Overview of R-2508 Complex Airspace.*

7.1.2 Military Operations Areas (MOAs) and Air Traffic Control Assigned Airspace (ATCAA)

The Military Operations Areas (MOA) and Air Traffic Control Assigned Airspace (ATCAA) areas (see Figures 2-1 and 2-2) combine with R-2508 (see Figure 7-1) to form the four major work areas:

- Isabella
- Owens
- Saline
- Panamint

This creates working airspace from 200 feet AGL and up, throughout the entire R-2508 Complex. Isabella, Saline, and Panamint work areas have peripheral areas made up of MOA and/or ATCAA airspace that increases the size of the usable airspace.

7.1.3 Other Airspace

Other airspace includes the Daggett Shelf and the R-2515 Golden Triangle.

The **Daggett Shelf** (see highlighted portion of Figure 7-1) was established by a Letter of Agreement to provide the FAA relief control of IFR traffic through the Daggett/Hector corridor. The Daggett Shelf, along with Shoshone South ATCAA airspace, remains under LA ARTCC control until JOSHUA requests and receives control.

The **Golden Triangle** (see Figure 6-5) is a portion of R-2515 that extends north of the westerly extension of the southern boundary of R-2524.

Coordinates for the Golden Triangle:

> Beginning at 35°27’40”N/117°26’03”W;
> thence direct 35°15’56”N/117°26’03”W;
> thence direct 35°15’56”N/117°43’41”W;
> thence to the point of beginning.

7.2 Type of Activity within Work Areas

Typical operations within the R-2508 Complex include:

- Aircraft research and development in all stages of flight
- Operational weapons test and evaluation flights
- Student pilot training
- Air combat maneuvering (ACM) and proficiency flights
- Civilian test aircraft in direct support of DoD and/or defense testing

Test operations must remain flexible and airspace requirements are not entirely predictable. Therefore, to best use the available airspace, participating aircraft operating in R-2508 Complex shared-use airspace are not given exclusive use of the airspace and are considered to be operating under concurrent operations.

Participating aircraft must accept radar traffic advisories and use the "see-and-avoid" principle to avoid interfering with the missions of other aircraft.

7.3 Non-Military Activity within the Complex

Activity within the R-2508 Complex is not limited to scheduled aircraft. Private civilian operations also occur as follows:

7.3.1 General Aviation

General aviation aircraft fly unrestricted in accordance with Visual Flight Rules (VFR) within the R-2508 Complex MOAs below FL180. Figure 7-3 shows the most common and heavily flown routes.

7.3.2 Hang Gliding / Ultralight / Parachuting

Hang glider operations are conducted along the Sierra Nevada Mountain Range, along the west and northeastern shoreline of Owens Dry Lake, throughout the Owens Valley, and north along the Inyo Mountain Range to Bishop, California.

Ultralight activity is also popular in many areas throughout the R-2508 Complex MOAs. This activity is primarily concentrated around towns and civil airports within the R-2508 Complex.

California City Airport is also used for parachute activities from surface to 17,500 feet MSL by private parachute clubs and occasionally DoD aircraft.

7.3.3 Sailplane

Sailplane activities are conducted daily from the Tehachapi Mountain Valley, Lone Pine, Independence, Rosamond, Mojave, California City, and Inyokern airports.

A sailplane Wave Camp (see Figure 7-2) is charted in the Isabella MOA and can be scheduled for use whenever soaring conditions permit.

During the Wave Camp, sailplane operations can be extremely heavy in the vicinity of Mojave and California City Airports due to the launch and recovery of flights to/from the airports transiting to/from the operating areas. Normally, the heaviest concentration of sailplane operations can be expected along and east of the Sierra Nevada Mountains from Tehachapi Pass to the mouth of Lone Tree Canyon (13 NM northeast of Tehachapi Pass).

- **Sailplane operations below FL180 are concentrated, but not confined, in the Isabella MOA, and will remain clear of all internal restricted areas.**

- **Sailplane operations FL180-FL500 are required to have an operating Mode C transponder and maintain two-way radio contact with JOSHUA.**

Coordinates for the Wave Camp area:
Beginning at 35°09'N/118°01'W (California City Airport)
thence direct 35°03'N/118°09'W (Mojave Airport)
thence direct 35°06'N/118°18'W (Highway 58/Tehachapi Pass)
thence direct 35°14'N/118°05'W (mouth of Lone Tree Canyon)
thence direct to the point of beginning.

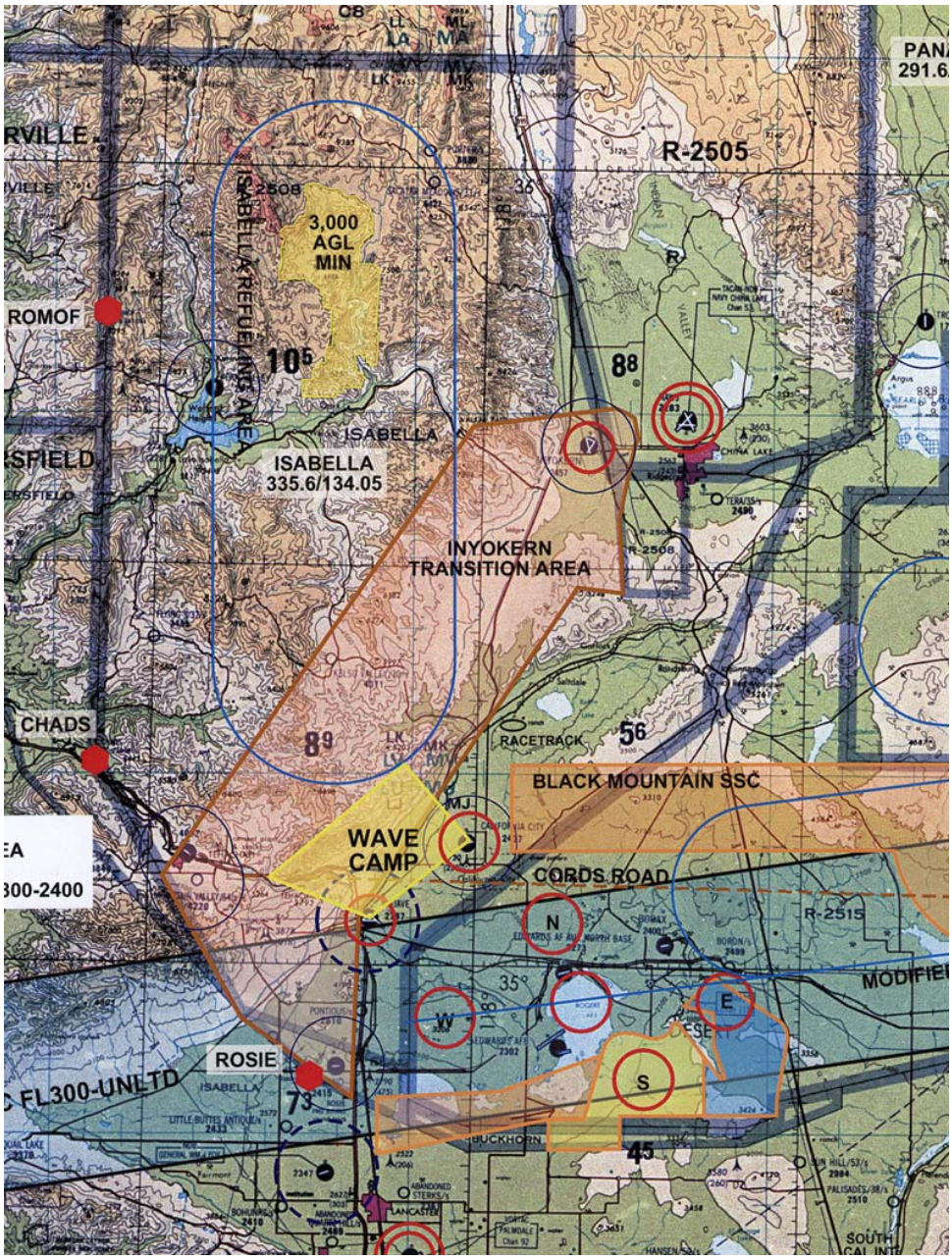

Figure 7-2. *Wave Camp area.*

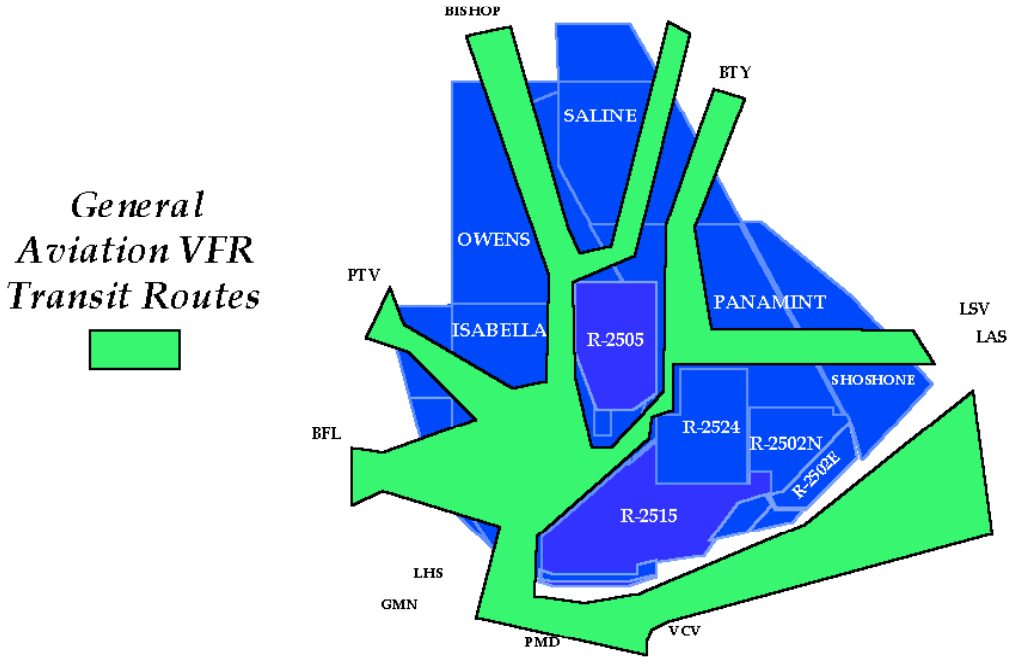

Figure 7-3. *General Aviation VFR Transit Routes*

7.3.4 Land Management Agency Operations

Land Management Agency helicopters and fixed-wing aircraft operate in the R-2508 Complex, primarily in the western portions of Isabella and Owens, and also in the Panamint and Death Valley areas.

- Administrative support aircraft operations are normally 1,500 feet AGL and below.
- Actual fire fighting and associated support operations will normally be conducted within a Temporary Flight Restriction (TFR) (FAR 91.137) NOTAM area within a defined area and altitude block.
- **However, aircraft operations to/from staging bases <u>may occur outside</u> the NOTAM areas.**

7.4 Sensitive Areas

The military mission within the R-2508 Complex has long enjoyed the support of the population that lives beneath the R-2508 Complex airspace. This support is essential to DoD's effort to preserve the R-2508 Complex for future military use.

Occasional sonic booms and noise complaints relating to flight over sensitive areas (small towns, airports, and recreation areas; see Figure 7-6) can have a negative affect on the DoD/civilian community relationship.

NOTE: Aircrews must adhere to Federal Air Regulation (FAR) and DoD rules pertaining to supersonic operations, endangerment of private property, and annoyance to civilians.

Areas of concern include:

- Overflight of National Parks and Wilderness Areas
- Overflight of populated areas and the Owens Valley
- Overflight of private commercial activities

7.4.1 Overflight of National Parks/Wilderness Areas

Low-flying aircraft over National Parks and Wilderness areas is an extremely sensitive issue.

***All aircrews SHALL maintain a minimum altitude of 3,000 feet AGL over, and a lateral distance of 3,000 feet (approximately ½ nautical mile) from the Death Valley National Monument, Sequoia & Kings Canyon National Parks, and the Domeland and John Muir Wilderness Areas (see Figures 7-4 and 7-5).**

Also, in an effort to minimize noise complaints from 23 May to 30 September, *low-level operations over Sequoia National Forest (south of Sequoia NP) are restricted after 2000 (Local) on all Friday, Saturday, and extended to include Sunday nights, during the Memorial, Independence, and Labor Day weekends.*

- **Mission-essential flights needing to operate during these times must coordinate with CCF at least 3 working days prior to the mission.**

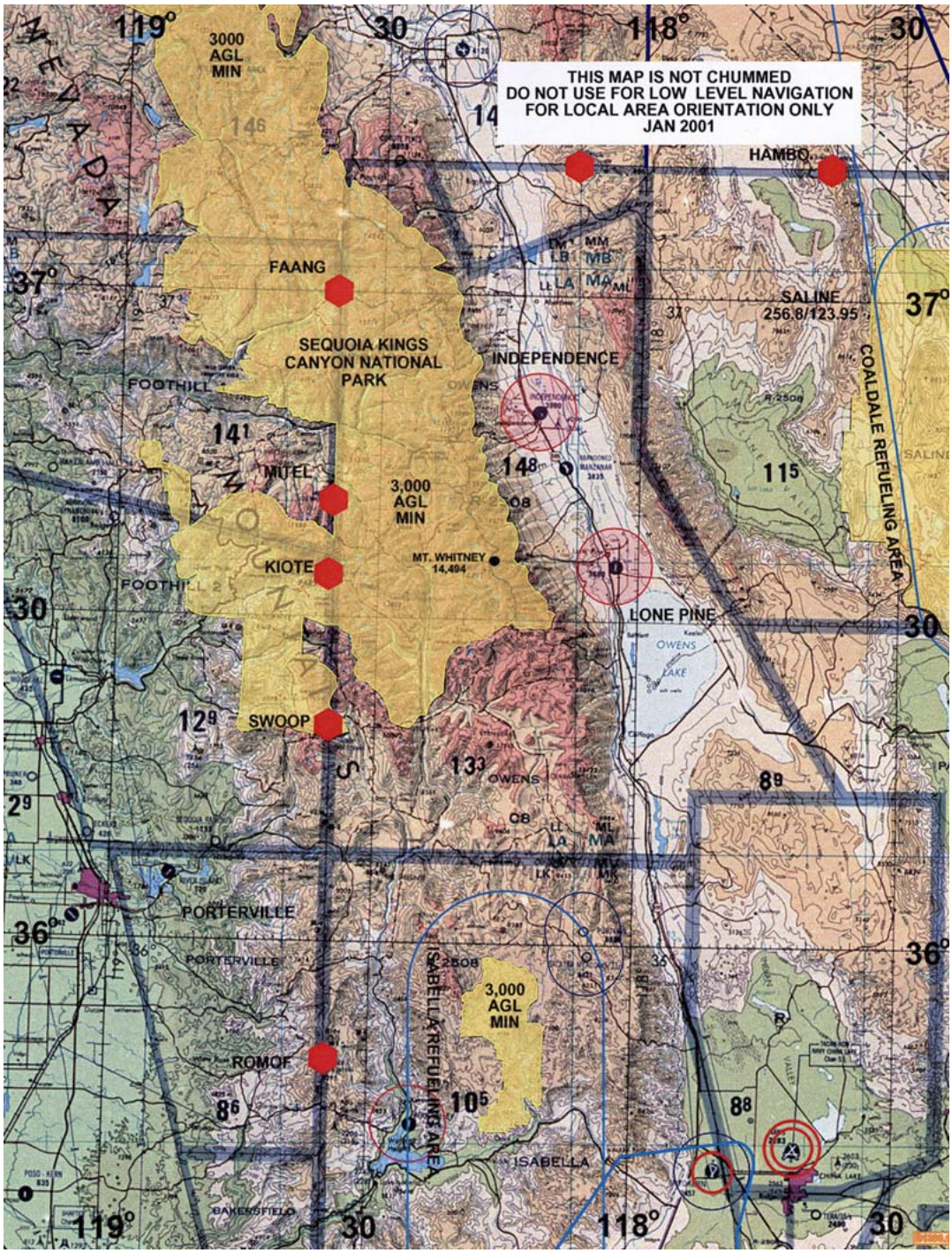

Figure 7-4. *Sequoia/Kings Canyon National Park and Domeland Wilderness area.*

****Due to high visibility and potential impact on DoD, land management agencies, and civilian populace relations, aircrews should avoid these areas as much as possible. If your mission requires overflight of these areas, strictly abide by the overflight altitudes.**

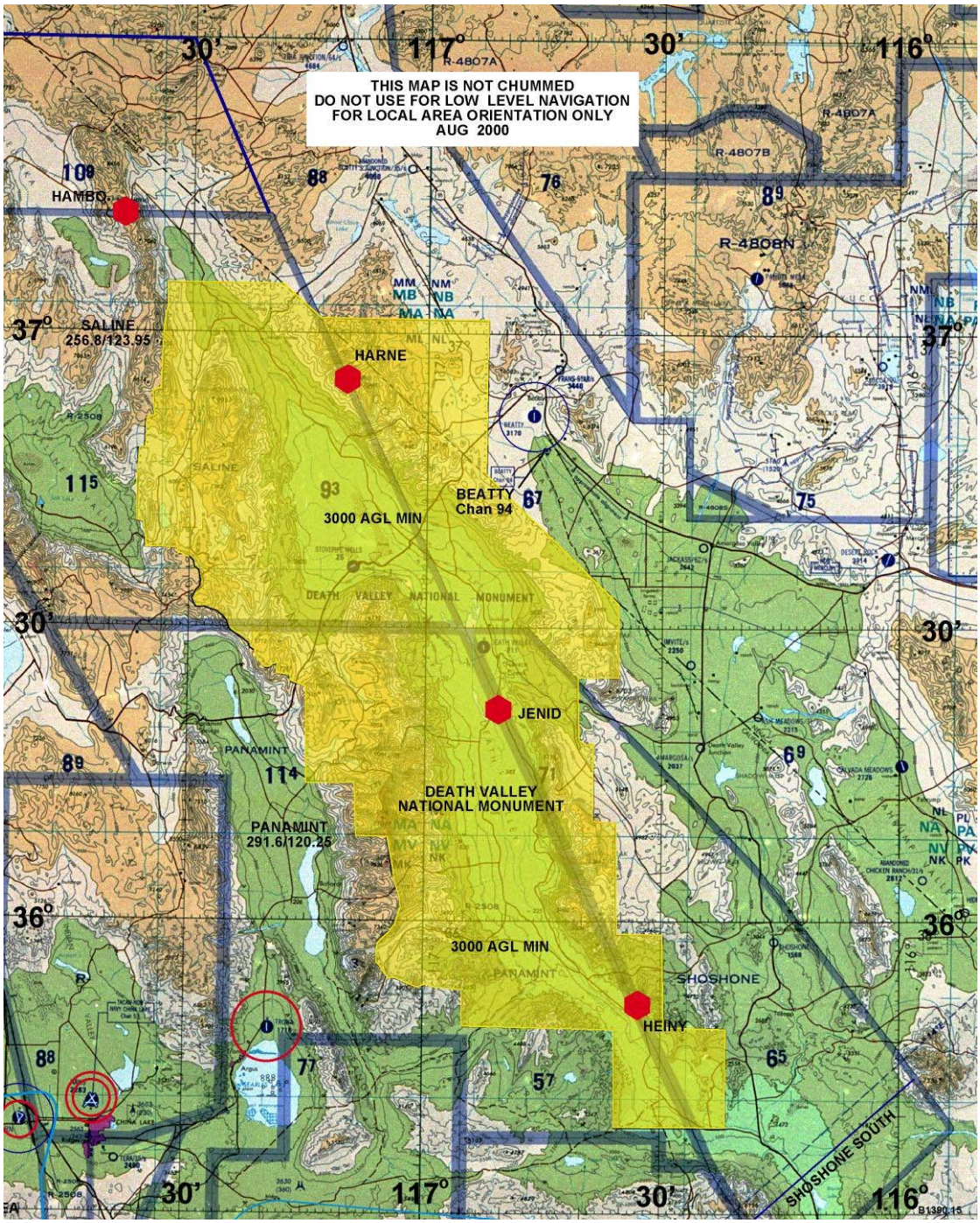

Figure 7-5. *Death Valley National Monument.*

NOTE: Exclusion of the MOA airspace above Death Valley National Park and Domeland Wilderness Area applies to the 1977 contours of the former National Monument and Wilderness Area. This difference in affected airspace may not be accurately reflected in sectional charts. Contact CCF if you have further questions.

7.4.2 Overflight of Populated Areas and the Owens Valley

Aircrews should maintain at least 3,000 feet AGL above inhabited areas and communities (see Figure 7-6), including:

- Lone Pine
- Independence
- Johannesburg
- Trona
- Olancha
- Red Mountain
- Kernville
- Randsburg
- Lake Isabella
- Inyokern
- Tehachapi
- Ridgecrest

The towns of Lone Pine and Independence are very sensitive to the noise created by military activities in their area.

- Aircrews should avoid conducting ACM activities over towns, especially in the Owens Valley. Even though the ACM activity may be at legal altitudes, such activity over towns should be avoided.
- Avoid low-level overflight of any obviously inhabited area.
- Recreational use near these communities and along the Kern River is highest during the summer months. Aircrews should anticipate increased sensitivity to operations near these areas.

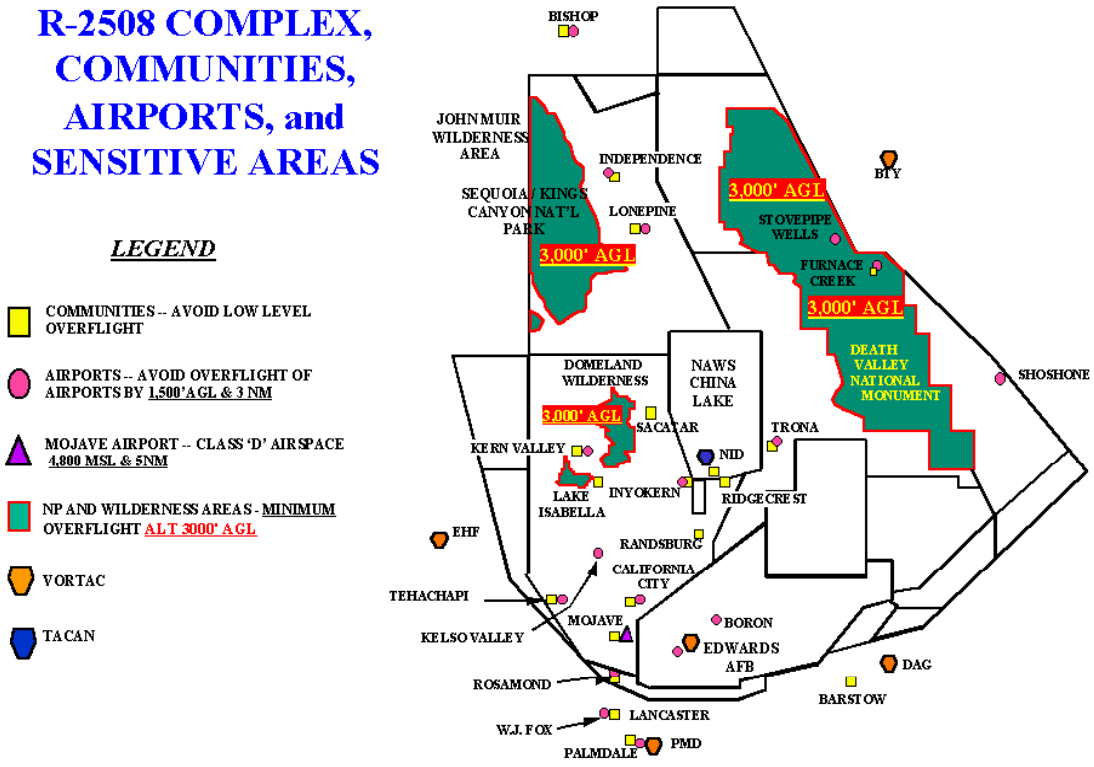

Figure 7-6. *R-2508 Complex Communities, Airports, and Sensitive Areas.*

7.4.3 Overflight of Private Commercial Activities

Aircrews should be aware of private commercial activities that occur within the R-2508 Complex. These include:

- **Private hunting club:** The official duck hunting season runs between October and January during the birds' southern migration. A hunting club on Little Lake (35°57'N/117°54'W), a migratory stop, private hunting activity. Aircrews should be alert for dangers of bird strikes transiting low-level through this area during hunting season. In addition, beware of increased bird activity within ±1 hour of sunrise and sunset from October to March.
- **Randsburg Gold Mine:** A gold mine operated at Randsburg (35°21'30"N/117°36'45"W) conducts blasting with a vertical hazard footprint up to 400 feet AGL. Blasting is scheduled daily between 1400(L) and 1700(L).
- **Panamint Gold Mine:** A gold mine located in the Panamint Valley, approximately 7 mines south of Ballarat (36°56'17"N/117°11'09"W) conducts daily blasting from 1600–1730 (L). Flyrock hazard to indeterminable altitudes. Avoid direct overflight during blasting periods.

7.5 Cautions in Using the Complex

Low observable platforms (i.e., F-22, F-117, B-2) conduct flight tests throughout the R-2508 Complex. During these missions, it is critical these aircraft not be used as targets for any ground, airborne, or space-based sensors or emitters. If any device inadvertently tracks these aircraft, the resulting data is classified and must be properly safeguarded.

After flight, immediately report the incident to the Edwards AFB Command Post (DSN 527-3040) for disposition of data and debriefing instructions.

Any person that discusses information relating to sensor effectiveness in acquiring, tracking, and targeting these aircraft with anyone other than the person assigned to investigate the incident may violate Federal and DoD regulations and policy for the protection of classified information in Special Access Required (SAR) programs.

Chapter

8

8.0 R-2508 Management and Control

This chapter discusses the responsibilities for the management of R-2508 airspace.

8.1 Airspace Management

Airspace management for the R-2508 Complex is organized into three groups:

- R-2508 Joint Policy and Planning Board
- R-2508 Complex Control Board
- R-2508 Central Coordinating Facility

8.1.1 R-2508 Joint Policy and Planning Board

Management of the R-2508 Complex falls under the R-2508 Joint Policy and Planning Board (JPPB). The JPPB was founded in 1975 under direction of the Joint Logistics Commanders and approved by the respective Service Chiefs and the Office of the Secretary of Defense.

JPPB members are the Commanders of:

- Naval Air Warfare Center, Weapons Division (NAWCWPNS), China Lake
- Air Force Flight Test Center (AFFTC), Edwards AFB
- National Training Center (NTC), Fort Irwin

The mission of the JPPB is to:

- Enhance and preserve R-2508 Complex bases, ranges, and special-use airspace
- Increase the Department of Defense (DoD) capability for research, development, test, and evaluation (RDT&E) of aircraft and weapons systems

The JPPB preserves an area for operational training and readiness of DoD-sponsored activities, establishes broad operational policy, and is the approval authority for all matters in the joint management and control of military activities within the Complex.

8.1.2 R-2508 Complex Control Board

The R-2508 Complex Control Board (CCB), established in 1975, is comprised of individuals directly representing their respective JPPB Commander. The mission of the CCB is to supervise management of the R-2508 Complex.

The CCB assists the JPPB Commanders by:

- Advising and assisting in the conduct of JPPB matters

- Establishing policies for Complex user operations—including areas and hours of operation, communication procedures, and mission profiles—designed to promote optimum safety for all users
- Formulating a unified position on R-2508 Complex airspace matters of mutual interest

8.1.3 R-2508 Central Coordinating Facility

The Central Coordinating Facility (CCF), under direction of the CCB, is the managing and scheduling authority for R-2508 Complex shared-use airspace. Within the policy, scope, and limitations set by the CCB, the CCF has autonomous authority for the R-2508 Complex shared-use airspace when the Complex is scheduled and activated for military use.
Responsibilities include:

- Acting as the single point for coordination of R-2508 Complex activities with High Desert TRACON and other ATC/mission control facilities, and release and recall of R-2508 Complex airspace
- Managing, documenting, and reporting, on a scheduled and real-time basis, airspace utilization and mission requirements of all military and civilian users in the R-2508 Complex
- Conducting unit/user/pilot briefings to ensure compliance with existing policies, procedures, rules and regulations, and other written agreements
- Monitoring Complex user mission requirements and advise procedures to ensure compliance with existing policies, rules, regulations, and written agreements
- Managing R-2508 Complex administrative requirements, facilities, equipment, projects, Operations and Maintenance (O&M) budget
- Administration of the R-2508 Complex Website
- Managing the R-2508 Complex Noise Complaint and SITREP programs

8.2 Controlling Agency

High Desert Terminal Radar Approach Control (TRACON), call sign "JOSHUA," is a FAA Air Traffic Control Facility and the controlling agency for the R-2508 Complex.
Responsibilities include:

- Providing traffic advisory service and boundary calls to the extent possible to all aircraft operating within the R-2508 Complex, depending on higher priority duties of the controller
- TRACON **DOES NOT** provide separation services to aircraft operating within the R-2508 Complex; operations in Complex airspace are on a "see-and-avoid" basis.
- Providing ATC services to non-participating IFR aircraft transiting the R-2508 Complex with respect to known activities on a non-interference basis

8.3 Using Agencies

Internal restricted areas within the R-2508 Complex (R-2502N, R-2502E, R-2505, R-2506, R-2515, and R-2524) are scheduled and controlled by their respective designated Using Agencies. See Chapter 6 for scheduling and operating procedures for internal restricted areas.

Appendix

A

Appendix A: Glossary of Abbreviations, Acronyms, and Terms

This appendix lists and describes the acronyms and abbreviations used in the handbook.

Item	Meaning
AAA	Anti-Aircraft Artillery
AAF	Army Air Field
ACM	Air Combat Maneuvering
AFB	Air Force Base
AFFS	Army Flight Following Service
AFFTC	Air Force Flight Test Center
AGGR	Air to Ground Gunnery Range
AGL	Above Ground Level
ALTRV	Altitude Reservation
ANG	Air National Guard
ARM	Anti-Radiation Missile
ARTCC	Air Route Traffic Control Center
ARU	Airborne Radar Unit
ASC	Airspace Surveillance Center
ATC	Air Traffic Control
ATCAA	Air Traffic Control Assigned Airspace
ATO	Air Tasking Order
AWACS	Airborne Warning and Control System
BFM	Basic Fighter Maneuvers
CAS	Close-Air Support
CCB	Complex Control Board
CCF	R-2508 Central Coordinating Facility
CFA	Controlled Firing Area
DoD	Department of Defense
DME	Distance Measuring Equipment
DSN	Defense Switching Network
ECM	Electronic Counter Measures
ECR	Electronic Combat Range
EW	Electronic Warfare
FAA	Federal Aviation Administration
FAR	Federal Air Regulation
FL	Flight Level
FLIP	Flight Information Publication
GCI	Ground Control Intercept
GP	General Planning
HATR	Hazardous Air Traffic Report
I&M	Improvement and Modernization
IASO	Installation Aviation Safety Officer
IAW	In accordance with
IFR	Instrument Flight Rules
JPPB	Joint Policy and Planning Board
LOA	Letter of Agreement
MOA	Military Operations Area
MRU	Military Radar Unit
MSL	Mean Sea Level
MTR	Military Training Route
NACC	NTC Airspace Control Center

Item	Meaning
NAS	Naval Air Station
NAWCWPNS	Naval Air Warfare Center, Weapons Division
NAWS	Naval Air Weapons Station
NM	Nautical Miles
NMAC	Near Mid-Air Collision Report
NOTAM	Notice to Airman
NTC	National Training Center
NVD	Night Vision Device
O&M	Operations and Maintenance
OHR	Operational Hazard Report
OSA	Open Skies Airfield
OSIA	On-Site Inspection Agency
OT&E	Operational Test and Evaluation
POC	Point of Contact
POE	Point of Entry
PPR	Prior Permission Required
RCC	Range Commanders Council
RCF	Radar Control Facility
RCO	Range Control Officer
RDT&E	Research, Development, Test, and Evaluation
ROA	Remotely Operated Aircraft
RTB	Return to Base
RWR	Radar Warning Receiver
SAM	Surface-to-Air Missile
SAR	Special Access Required
SFC	Surface
SRB	Safety Review Board
SUA	Special-Use Airspace
TFR	Temporary Flight Restriction
TRACON	Terminal Radar Approach Control
TW	Test Wing
TS	Test Squadron
UAV	Unmanned Aerial Vehicle
UHF	Ultra-High Frequency
UNLTD	Unlimited
VFR	Visual Flight Rules
WAFC	Western Area Frequency Coordinator

Appendix

B

Appendix B: Large Scale Exercise Planning Checklist

This checklist helps planners prepare for a large-scale exercise. The guidance is given as follows:

B.1 At Least 30 Calendar Days from Operations

B.2 At 14 Calendar Days from Operations

B.3 At 3 Working Days from Operations

B.4 At 1 Working Day from Operations

B.1 At Least 30 Calendar Days from Operations

With at least 30 calendar days until your intended operations, you should be on your way to planning the exercise.

B.1.1 Initiate Planning and Coordination

During initial planning and coordination:

1. **Assign a single point-of-contact to represent your mission.** Forward this information to CCF and other concerned agencies.
2. **Provide the Exercise Planner with a copy of this checklist** and attached quick-reference Users Exercise Planning Checklist. These checklists will help planners ensure they get the required coordination and that they meet all exercise data requirements.
3. **Prepare the initial plan**. This information will be used to prepare a briefing sheet to be distributed to TRACON and R-3508 Complex users. Include:
   - Desired airspace areas and altitudes
   - Date and time periods (and backups, if applicable)
   - Basic scenario with ingress/egress routes, tanking, adversary, and control and communication procedures
   - Other information that pertains to operational requirements (i.e., GCI support)

NOTE: Exercises using the R-2508 Complex should include CCF and TRACON as addresses in mission/flight planning messages.

CCF: 2508CCF EDWARDS AFB CA//
TRACON: FAA HIGH DESERT TRACON EDWARDS AFB CA//

4. **Ensure all participants are authorized to operate in accordance with R-2508 Complex operating procedures** (see Chapters 2 through 7 of the *R-2508 Complex User's Handbook*).
5. **Determine frequencies to be used** and coordinate with CCF, FAA facilities, and range agencies.
6. **Coordinate check-in/check-out procedures** with appropriate FAA facilities.
7. **Check for other agencies that may require advance coordination** (i.e., FAA ARTCCs, Military representatives to the FAA, Frequency Coordinators). Refer to *R-2508 Complex User's Handbook*.
8. **Call the range facility early to identify range requirements.** Advance notice and information required may vary between scheduling agencies and types of missions. An early call to the appropriate range facility will help.
9. **Coordinate with CCF and required range agencies for basic exercise and range requirements.** Ensure all exercise plan changes are coordinated with appropriate agencies throughout the life of the exercise.
10. **Coordinate check-in/check-out procedures** for the R-2508 Complex in advance with FAA TRACON.
11. If determined necessary by the CCF, **send a brief exercise initial plan to the CCB.** If revisions are required by the CCB, revise the plan and brief the CCB or appointed representative.

B.1.2 Preparing the Plan

When preparing the plan, be sure to include the following:

- R-2508 Complex entry/exit points, altitudes, and routing within the Complex
- Check-in/check-out procedures for the R-2508 Complex
- Tanker locations, altitudes, and frequencies
- AWACS/E-2/designated comm. aircraft location, altitude, and frequency. If no AWACS/E-2 is available, designate a communications aircraft.

NOTE: Communications aircraft must request and receive a Work Area Clearance from TRACON before entering the R-2508 Complex.

- ECM aircraft positions
- Designated ACM areas
- All exercise frequencies, call signs, and squawks

NOTE: Immediately submit changes to CCF. Last-minute changes to the plan may not be approved due to lack of coordination time.

B.1.3 Tips for Initial Planning and Coordination

Avoid the following when planning the exercise:

- Do not place refueling or other anchor/orbit points too close to Complex boundaries. There are three non-published refueling areas available for use within the Complex (see Figure 2-4).
- **Avoid noise sensitive areas, National Parks, and low-altitude routes in these same areas (see Chapter 7 of the *R-2508 Complex User's Handbook)*.**
- Do not place anchor points in areas of concentrated activities, such as Owens Dry Lake, Saltdale, or the Trona Corridor.

Your planning and coordination will be smoother if you also keep in mind the following:

- Existing restrictions (such as National Park over-flight altitudes) are in place to help preserve our use of the Complex to fulfill missions and to protect other interests in the area. Do not request deviations to existing restrictions.
- Do not expect to receive segregated airspace outside of the internal restricted areas.
- Do not expect to receive clearance for unrestricted ACM. Generally, ACM can be conducted in Owens, Saline, or Panamint (see Figure 2-4). Unrestricted ACM throughout R-2508 Complex will generally not be approved.
- Expect transit corridor restrictions to be imposed to allow other users access to the work areas without conflicting with exercise ACM activity.

If the exercise activity centers around:

- **R-2505/Coso Range:** Plan on requesting Isabella, Owens, Saline, and/or Panamint. If Panamint is required, plan to conduct ACM north of 36°08'N and remaining west of Telescope Peak (36°08'N and 117°05'W).
- **R-2524:** Request to have ACM activity in Panamint south of 36°08'N and west of Telescope Peak.
- **R-2502N (Leach Lake):** Request ACM activity in Panamint south of 36°08'N and east of Telescope Peak.

- Call or send a message to the scheduling agencies with jurisdiction over planned use restricted areas/ranges and airspace to validate coordinated requirements.

B.2 At 14 Calendar Days from Operations

Within 14 days of planned operations:

1. Have your exercise representative **brief the approved exercise plan in advance to CCF**. Invite range and ATC representatives from China Lake ASC, Edwards AFB SPORT, and JOSHUA, as appropriate.

B.3 At 3 Working Days from Operations

Within 3 working days of your planned operations:

1. Finalize the exercise plan by defining operational requirements in the R-2508 Complex. Coordinate this plan with CCF and request any additional assistance needed.
2. Brief representatives from each participating unit on exercise procedures prior to their strike/tactics planning.
3. Plan to have at least one representative from CCF and appropriate agencies brief participating aircrews on airspace and range procedures and concerns.

B.4 At 1 Working Day from Operations

At least 1 working day before the start of operations, submit final call signs, number and type aircraft, squawks, and changes to CCF.

Changes other than minor (i.e., call sign, number and type aircraft, and time changes) will normally not be accepted after this time.

Appendix

C

Appendix C: Mission Planning Checklist

When planning a mission, the mission planner must submit the final form by message, fax, or E-mail. The mission planner is responsible for ensuring that CCF received the plan.

NOTE: Ensure that the information submitted to CCF is complete and accurate for planning and scheduling the exercise. The better you plan, the fewer problems exercise aircraft will likely encounter.

On the form, include the following:

1. **Point of Contact / Mission Planner name and phone number (DSN and commercial).**
   - Identify method of contact (fax number, message address, or e-mail).
   - If POC will not be consistently available, list alternates with corresponding contact information.
2. **Airspace requirements.**

Identify:

- Dates and Times (indicate "Z" [ZULU] or "L" [LOCAL])
- MOAs/ATCAAs and Restricted areas (if for transition only, state "transition only")
- Altitudes requested
- Tanker areas/tracks for use in or in vicinity of the Complex
- Canned routes, MTRs, and/or entry/exit fixes for ingress/egress

EXAMPLE: **1 MAY 01**

R-2508/Isabella/Panamint, 1600–1730 (Z), 0–FL350
R-2524 (SV), 1945–2115 (Z), 0–FL240
R-2515 (GT), 2030–2200 (Z), 0–FL180, Transit only
Isabella Refueling Area, 1500–1615 (Z), FL210–FL250
Ingress / Egress: CHADS / ROSIE

3. **Alternate dates and times requested.**
4. **Number and type aircraft.** List separately by area if not applicable to all areas. Include departure/arrival airports for aircraft.

5. **Mission Title (i.e., JTFX 96-3) and Activity Description.** Specify all activities that apply; i.e., tanking, AIC, ACM, bombing, terrain following. Also, answer the following questions:

   - **ECM?** If yes, specify:
   - Passive (chaff) or active (jamming)
   - Intended areas and times for use*
   - **Comm Ship?** If yes:
   - State type of aircraft and planned orbit location (even if outside of the Complex).
   - Briefly describe the communication scenario i.e., AWACS will keep adversaries on discrete and strike will check in on range frequency.
   - List Comm Ship POC and phone number, if other than the Mission Planner.
   - If the Comm Ship is an AWACS or ARU, separate coordination requirements apply. The POC must directly deal with CCF.
   - **ACM?** If yes, identify adversary aircraft and CAP points (areas and altitude).
   - **Planned frequency use***
   - Identify any discrete frequencies planned for use in the Complex and requirements for monitoring (see *R-2508 Complex User's Handbook* for inactive/active monitoring).

NOTE: Unless special comm. ship coordination is approved for check-in and/or checkout, individual flights must contact JOSHUA for ingress/egress on appropriate ATC frequency.

   - For range use, list planned range frequencies. State if more than one range frequency is needed for simultaneous use (versus just a backup frequency).
   - Identify special requirements for frequency coordination. For example, if all Complex ops requested to be worked on one or more discrete or range frequencies, specify what you are asking for. Do not assume that listing frequencies alleviates the need to change frequencies. You must coordinate specifically between affected agencies for use of a single frequency or a set of frequencies.

This request does not relieve the Mission Planner of responsibility to coordinate frequency/ECM requirements through appropriate Frequency or Spectrum Managers

   - **Pre-Coordinated Squawks?** For JCS large-scale exercises, Mode 3 codes may be assigned by HQ NORAD. Pre-assigned NORAD discrete codes may be obtained by message at least 30 days before STARTEX, addressed to: HQ NORAD PETERSON AFB CO//J3OG//

- **Supersonic Flight?** Refer to *R-2508 Complex User's Handbook* for the policy on shared-use airspace. Expect specific approval for range operations.
- **Additional Requirements?** Identify flight plans (RTB or NID, VFR or IFR egress), special routing information, GCI (specify requirements), requests for additional briefing material/support.

6. **Specific Range (Internal Restricted Area) Requirements.**
   - Range (SV, Baker, George, Coso, Charlie Airfield)
   – Number and type aerial targets
   – Number and type delivery maneuvers (state if captive)
   – Number and type of ordnance for each aircraft (GM-MK/Mod guidance and W/H sections). State if live or inert.
   – Instrumentation requested
   – Impact information requested
   – Aircraft, ground, ordnance positioning requirements
   - Additional range requirements
   – Laser? If yes, describe by range.
   – Supersonic Operations? If yes, state reason for requirement.
   – Any other special activities planned or additional services needed?

7. **Describe mission Concept of Operations, Special Instructions, and/or Mission Scenario as it applies to the R-2508 Complex.** Provide CCF with the Air Tasking Order (ATO) and aircraft call signs immediately upon issuance.

8. **Describe contingency plans and scenario changes due to loss of tanker or AWACS support.** Will one of the mission aircraft act as a Comm ship? Routing coordination for: (insert mission title)

Appendix

D

Appendix D: R-2508 Situation Report

R-2508 SITUATION REPORT	**DATE RECEIVED:**	
FROM: **(OPTIONAL)**	TO: **R-2508 Central Coordinating Facility,** **100 E. Sparks Dr. Edwards AFB CA 93524-8090** **DSN: 527-2508 FAX: DSN 527-4798**	DATE OF REPORT:
This form is intended for the reporting of circumstances/services that enhance or degrade the users' mission within the R-2508 Complex. It may be used by aircrews or controllers to submit any constructive information to improve the safety and efficiency of aviation operations in the R-2508 Complex. Identification of the drafter is optional. This form will Not be used to replace reporting of situations that require submission of Hazardous Air Traffic reports (HATR), Operational Air Hazard Reports (OHR), or Near Mid-Air Collision (NMAC) reports. This report should be submitted within 5 days of the incident to ensure availability of the data necessary to analyze the reported situation. The information contained on this form is for <u>MILITARY OFFICIAL USE ONLY</u> and will be used for the exclusive purpose of improving safety and operations within the R-2508 Complex. No punitive or disciplinary action will be taken as a result of statements made on this form.		
DATE/TIME SITUATION OCCURRED:	LOCATION SITUATION OCCURRED:	
CALLSIGN(S) / TYPE AIRCRAFT:	OTHER AIRCRAFT INVOLVED:	
FREQUENCY(IES):	OTHER CALL SIGN(S) IF KNOWN:	
ALTITUDE:	CONTROLLING AGENCY:	
NARRATIVE: **(Be as complete as possible. Include recommendations to prevent reoccurrence. Add additional sheets as necessary.)**		